

# Get to Know Public Health Services Data Workshop



June 9, 2008

# Introduction



Leslie Upledger Ray, Ph.D.(c) M.P.H., M.P.P.A., M.A.

Community Health Statistics (CHS) Unit

# Today's Agenda

- Role of Public Health & CHS Unit
- Basic Information on Data Types & Measures
- Specific Public Health Services Databases
- Data Requests, Website Navigation
- “Ask an Epidemiologist” Q & A

# Binder Information

- Copy of all slides presented today
- Database information sheets
- Quick reference slides: who, what, when, where
- Index (Databases by topic)
  - For each topic/indicator, see page number for relevant databases
  - Page number of primary data sources in bold
  - e.g. want data on diabetes:
    - See databases: Hospital, ED, Death, CHIS, YRBS
- Flyer for Public Health Data Requests

# Thank You!

- Thank you for the positive response to this training - we hope to meet your needs and make this an informative and beneficial experience
- This training is a collaborative effort with representatives from all Public Health Services Branches - thank you for sharing your expertise

# Community Health Statistics Unit

## Rationale & Mission

- This unit was established in August 2004 by Public Health Officer in response to community requests for one central office to access Public Health Services data, the “One Stop Shopping” approach
- To provide health data to meet the needs of community partners and Health & Human Services Agency (HHSA) staff.

# Role of The Community Health Statistics (CHS) Unit

- “One Stop Shop” for health data
- Data Requests (619) 285-6479
- CHS Unit Website:  
[www.sdhealthstatistics.com](http://www.sdhealthstatistics.com)

# Understanding Data: Types and Measures



Leslie Upledger Ray, Ph.D.(c) M.P.H., M.P.P.A., M.A.

EMS, CHS



# Public Health Services Data

- Data is essential to
  - Assess and monitor health problems
  - Diagnose and investigate health hazards
  - Plan for emerging health issues
  - Understand the extent of the problem
  - Identify target populations
  - Implement and evaluate educational programs
  - Develop comprehensive policies
  - Establish priorities
  - Administer community-wide services
  - Compare to other communities, states, etc.

# Public Health Services Data

- Today's training will help you learn more about the public health data available and how to access it



# Data Measures

- Numbers tell you how many
  - 25 children under age 15 in San Diego died of cancer in 2001
- Percents tell you a proportion of the whole
  - 90% of attendees who ate potato salad at a picnic experienced symptoms of food poisoning
- Rates tell you how many per a given population and allow you to compare year to year or group to group
  - The rate of children injured in MVC dropped from 321.9 per 100,000 to 295.2 per 100,000 after the implementation of the program

# Slides & Speaker Format

Since you'll be hearing from 20+ data analysts today, the slides for each presentation are formatted in the same way.

The speakers or data bases are divided into groups according to type of database.

Public Health Services

# Types of Databases

- Sample or Survey
  - Statistical sample
    - Representative of the population
    - Results can be applied to the population
  - Convenience sample
    - Not representative of the population
    - Easy to obtain
- Service
  - Client data
    - Results apply to your service population
    - May not apply to all population with specific illness/injury
- Population-based
  - Virtually everyone with the illness/injury is included
  - Inclusion varies by database
- Useful Non-Health Data
  - Demographic or Census
  - Law enforcement

# Presentation Format

- Unit Background – in notebook, won't discuss here
- Data background – basics about data, will only mention unusual items
- Example - Illustrative example of data use, sample of project using data
- Graph – of above
- Data Highlights – examples of other projects & uses of this data

# Format Note - Program/Unit

## Program/Unit Background

More information is available in your notebooks to give you understanding of the purpose of the program where the data is maintained

Public Health Services

# Format Note - Data

## Timing of Data Availability

- Collection and processing takes time  
For example,
  - Local processing may take 6 months
  - State processing may take 2 years
- Most recent data may be several years old
- For many programs, periodic reports are available on program's website. More recent or additional data may be available by request.



# Format Note - Examples

You'll hear an example of how the data was used in a special project and several other ways the data is used – to inspire you to use the data



# Format Note – Q & A

Brief questions between speakers

In depth “ask an epidemiologist” Q & A at end





# Q & A



# Specific Databases



# Survey Databases

# California Health Interview Survey (CHIS) Data



Deirdre Browner, M.P.H.

Community Epidemiology

# CHIS Data: Background

- **Data available for** 2001, 2003 at county level only. 2005 contains some regional level data.
- **Data comes from** UCLA Center for Health Policy Research. The data are distributed after final processing is completed (approximately one year after the end of the survey)
- **Survey:** CHIS uses stratified random sampling techniques to create estimates for the County
  - Demographics, housing, employment, health insurance, public program eligibility
  - Health Behaviors: diet, exercise, access/use of health care, health screenings
  - Health Status: height, weight, health conditions, general health, dental health
- **Caveat:** Not all questions appear in every year of the survey and data can be coded differently between survey years leading to limited comparability

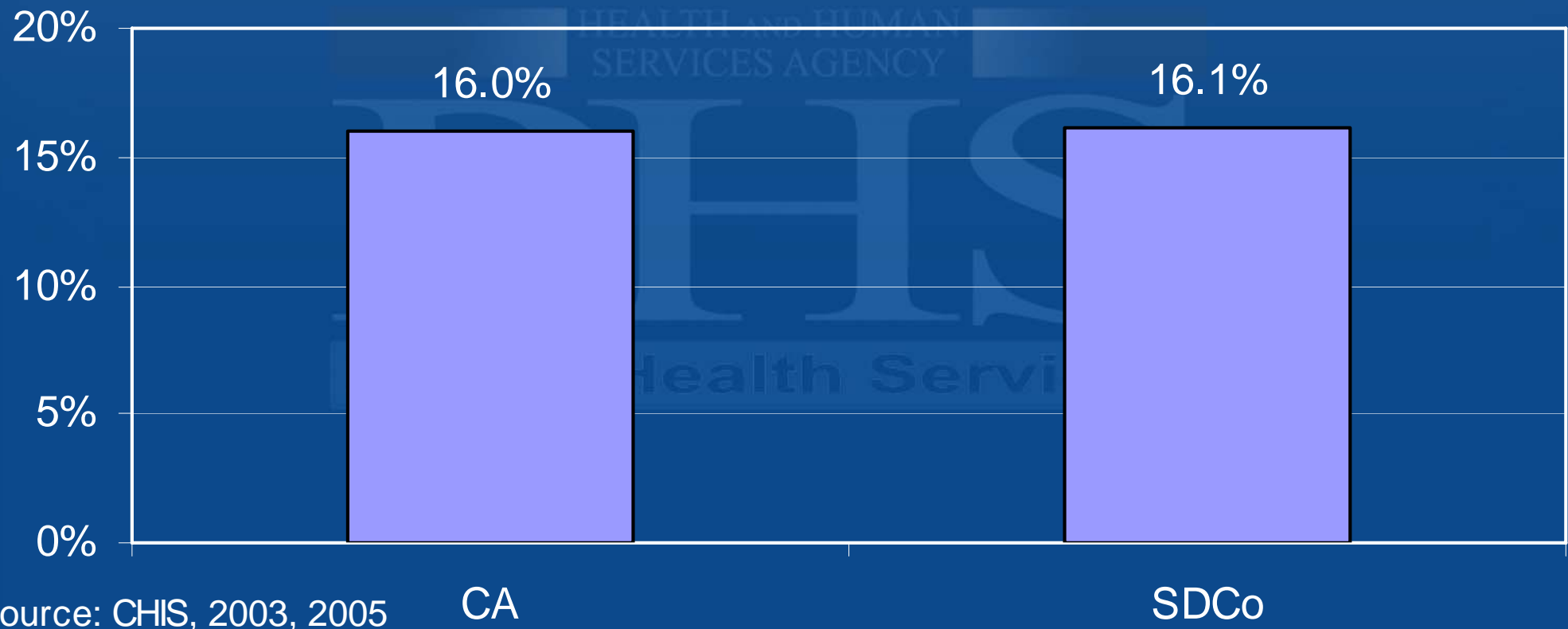
# Example: Childhood Obesity

- Several community leaders express a concern about rising rates of Childhood Obesity
- CHIS data for BMI for adolescents (12-18) shows the baseline in the percentage that are at or above the 95<sup>th</sup> percentile for age and gender for 2003 and 2005 pooled data
- The Childhood Obesity Initiative was developed as a public-private partnership with the County, CHIP, and other community partners
- County will continue to monitor adolescent overweight and obesity



# CHIS Data: Childhood Obesity

**CHIS, Overweight & Obese Adolescents (12-18),  
State and County, 2003 and 2005 pooled data**



# CHIS Data: Highlights

- Annual report online:
  - <http://www.healthpolicy.ucla.edu/pubs/pubList.asp>
- An over-sample of San Diego County in 2005 will provide HHSA regional level data
- First 5 San Diego used CHIS health insurance and oral health data in developing new, local requests for proposals. First 5 San Diego used CHIS data in its planning to allocate \$6 million for efforts to enroll uninsured eligible children in existing programs.
- The National Latino Research Center at Cal State San Marcos used data from CHIS in its publication, Health Disparities in San Diego County: Immigration and Citizenship.
- CHIS data was used in the Asian and Pacific Islander American Case Study: The Diabetic Vietnamese Population of San Diego County.
- SD Community Health Improvement Partners Report “Charting the Course”, 2004

# CHIS Data

Questions???



# Youth Risk Behavior Survey (YRBS) Data



Lacey Hicks, M.P.H.

Community Epidemiology

# YRBS Local Data: Background

- **Data available since 1991**
- **Data comes from** survey every 2 years in spring, data available in fall
- **Survey:**
  - Sample of 9<sup>th</sup> through 12<sup>th</sup> grade students
  - San Diego City Schools, No geographic identifiers (i.e. no school name)
  - Voluntary & anonymous
  - 2005: 1,695 students in 33 public high schools in SD Unified School District
- **Behaviors:**
  - Resulting in intentional and unintentional injuries
  - Alcohol and other drug use
  - Tobacco use
  - Sexual behaviors that result in HIV infection, other STDs, and unintended pregnancies
  - Dietary behaviors
  - Physical activity

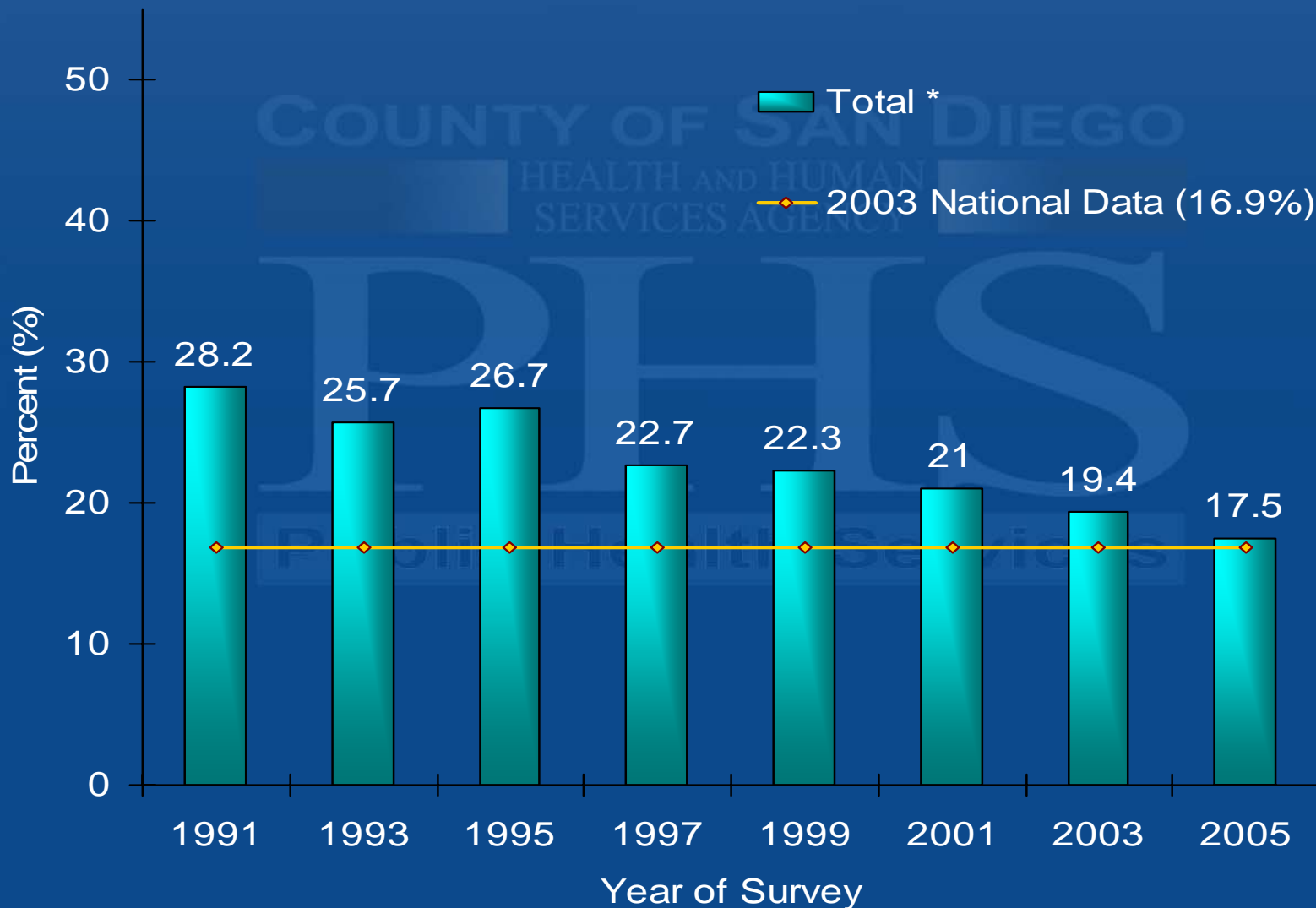
# Example: Suicide Ideation and Attempts

- Risk Behavior: Seriously considered attempting suicide, 26.7% in 1995
- Yellow Ribbon Suicide Prevention Campaign, Life Skills Training, and other programs through the schools' counseling departments
- In 2005, 17.5% of students in San Diego had seriously considered attempting suicide during the 12 months preceding the survey
- The behavior decreased significantly over time, controlling for changes in distributions by sex, race/ethnicity and grade

# Suicide Ideation and Attempts

## San Diego Youth Risk Behavior Survey, 1991-2005

**Percentage of students who seriously considered attempting suicide during the past 12 months, by year**



# YRBS Data: Highlights

- **Reports:**
  - Available at SD City Schools P.E. Health & Athletics Department
  - (619) 725-712; online at [www.sandi.net/depts/sex\\_ed](http://www.sandi.net/depts/sex_ed).
- **Prevention & Control Programs:**
  - Comprehensive Life Skills Programs (alcohol, tobacco and other drugs, anxiety & anger, etc); other programs in place through the schools' counseling departments
  - Track the effectiveness of current interventions
- **Surveillance:**
  - The district is able to view trends from year-to-year and address issues of concern
- **Planning & Priorities:**
  - Based on the data, the school district determines program direction, needed policy and student intervention



# YRBS Data

Questions???



# **Special Group or Service Databases**

Public Health Services

# Alcohol & Drug Services (ADS) Data



Alice McLennan

Alcohol and Drug Services (ADS)

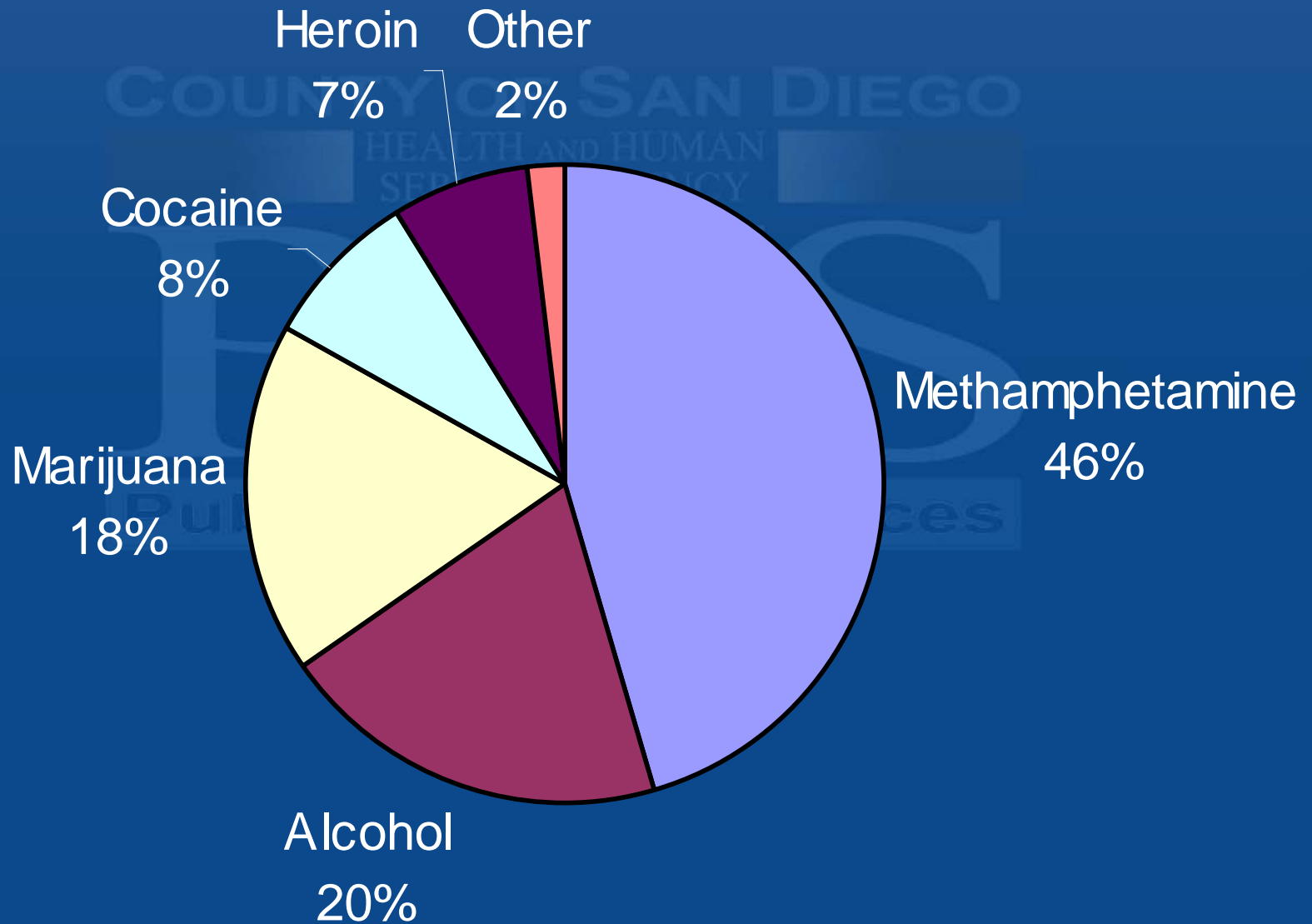
# Alcohol & Drug Services Data: Background

- **Data available since 1995**
- **Data is collected upon** admission, discharge and annual updates from patient follow up. Some data is federally or state mandated. Data is available after 1 month lag, future goal is real time access.
- **Database contains:**
  - All persons who use services at contracted County of San Diego alcohol and drug treatment facilities (voluntary and mandatory)
  - Demographics: age, race/ethnicity, gender, zip code
  - Drugs used, age at first use, number of treatments & more
  - Family, social, legal, medical, psychological
- **Caveat:** Data does not include private treatment facilities.

# Example: Drug of Choice

- Methamphetamine use has historically been high in San Diego County
- Reviewed admission data for drug of choice
- Data shows meth is #1 drug of choice among county treatment clients (FY06/07)
- Methamphetamine Strike Force & other groups working on intervention strategies
- County will continue to monitor trends

# Primary Drug of Choice, County Alcohol & Drug Treatment Facilities, FY 06-07 (n=12,013)



# Alcohol & Drug Services Data: Highlights

- Website:
  - [www.sdads.org](http://www.sdads.org)
- Prevention & Control Programs:
  - Binge drinking
  - Under age drinking across the border
- Surveillance:
  - State & National outcome measures
  - Methamphetamine Use
- Special Research Projects:
  - Treatment outcome measurement of various life domains
- Planning & Priorities:
  - HHSA Regions

# Alcohol & Drug Services Data

Questions???





# Mental Health Services Data



Kathy Anderson, M.P.A.

Quality Improvement, Performance Outcomes Unit

# Mental Health Services Data: Background

- **Data available since 2006**
- **Data comes from** monthly input from all outpatient & case management programs
- **Database contains:**
  - Clients eligible for governmental assistance, uninsured, court mandated treatment
  - Demographics including housing
  - Treatment information (diagnosis, medication, outcomes)
- **Caveat:** Data does not include those from private treatment facilities

# Example: MHS Performance Improvement Project

- Clients with co-occurring mental health and substance abuse problems were being under identified.
- 23% of adults with serious mental illness identified by National Survey on Drug Use & Health also have a substance abuse problem
- 16% of San Diego County Mental Health Services clients age 10+ years had a dual diagnosis

**Problem: Treatment decisions impacted by failure to identify full scope of clients' issues**

# Improvements Sought

- 1. Increased rate of appropriate identification of clients with Dual Diagnosis (DDx)
- 2. Increased inclusion of substance abuse indicators in client plans
- 3. Reduced rate of poor outcomes for clients with co-occurring disorders (COD)

Public Health Services

Measurement tools: InSyst records and retrospective Medical Record Reviews by QI

# Interventions

- Administrative and training improvements
  - Policies and procedures put in place
  - Documentation standards established
  - Standardized training implemented
  - Medical Record Review Tool updated for COD
  - Documentation process of COD in InSyst was modified
- Creation of standardized screening tools for Mental Health Services and Alcohol and Drug Services
- All providers created & posted Welcoming Statements for clients with COD

# Improvements Achieved

## By FY 06-07:

- 24% increase in adults with co-occurring disorders documented in InSyst
- 16% increase in client charts indicating a substance abuse diagnosis when warranted
- 11% increase in charts with correlating treatment plan objectives for DDx clients

# Mental Health Services Data: Highlights

- Data available upon request.
- Demographic Analysis of Mental Health Services Clients
  - Annual Data Book
  - Annual Fact Sheets
- Gap Analysis
- Client Outcomes
  - Employment, Education, Residential
  - Mental Health Recovery Treatment States
  - Substance Abuse Treatment Stages
- Use of Mental Health Emergency Services
  - Monthly Dashboard Report
- Special Research Projects:
  - Dual Diagnosis
  - Latino Access

# Mental Health Services Data

Questions???





# Immunization Data



Michelle De Guire, M.P.H., M.S.W., C.C.R.C.

Immunization

# Immunization Data: Background

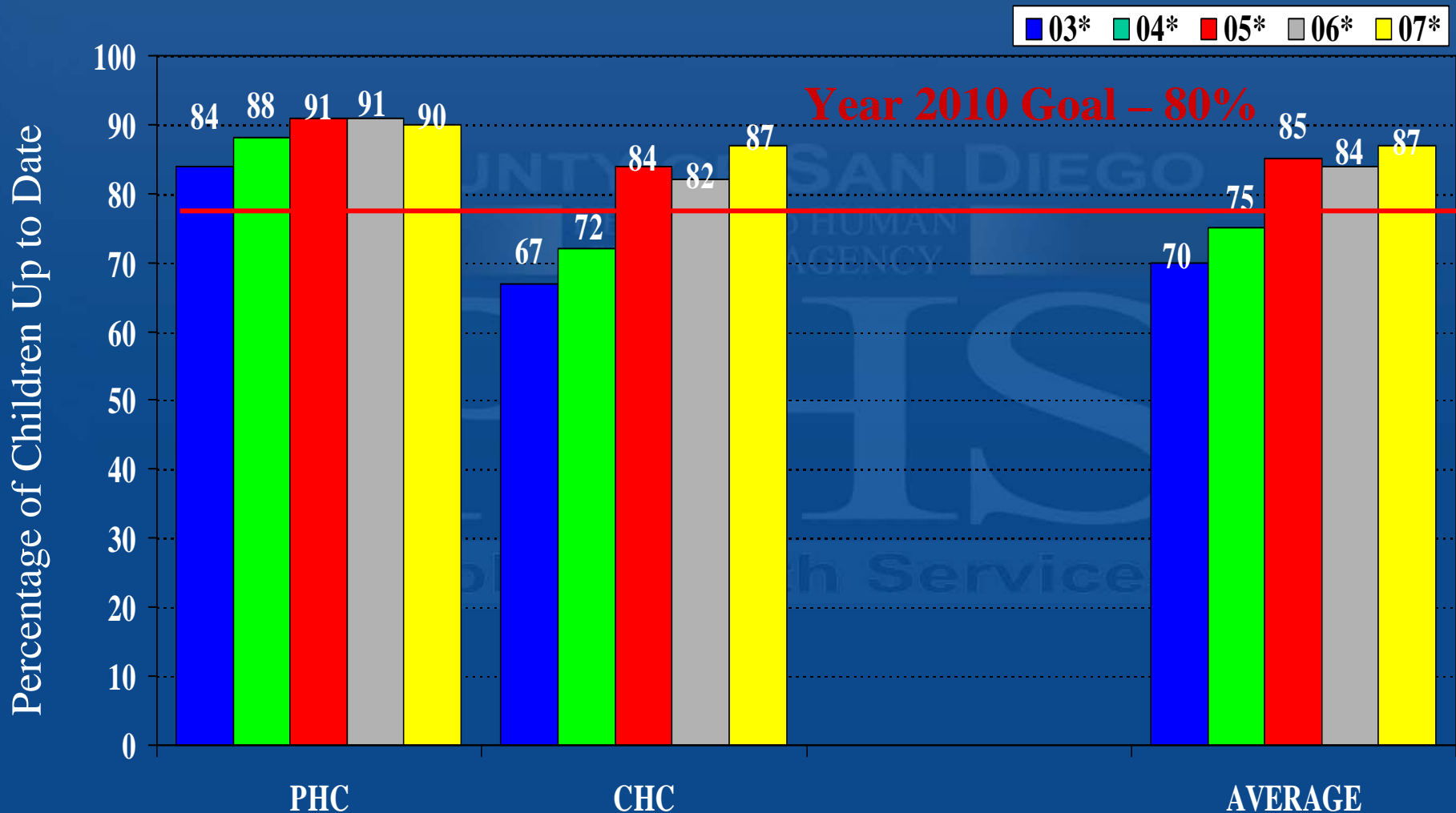
- **Data available since** 1990-2007, depending on source
- **Data comes from** surveys, medical charts, school records, immunization registry, various lag time for processing
- **Database contains:**
  - Who depends upon dataset and may include:
    - Cases (reportable, vaccine preventable diseases)
    - Sample of San Diego residents, or kindergarteners
    - Clients received immunization services at Public Health Clinics, Community Health Clinics and private practices cross County
  - Demographics: age, race/ethnicity, gender, education, zip code (limited)
  - Disease histories, Vaccine histories, Vaccine attitudes
- **Caveat:** sample bias, limited information at zip code level

# Example:

## Vaccination Coverage by Age 2

- Low immunization rates at Community Health Centers (CHC)
- Chart review to find out the causes
- Data shows high rate of drop off
- Reminder/recall to bring family back
- County reviewed latest rates
- Rates going up !

# San Diego County Public Clinic Coverage 4DTP, 3Polio, 1MMR, 3HIB, 3HBV and 1VAR (4:3:1:3:3:1) at 24 Months



\*Exclusion criteria: One visit to the clinic; Child either moved away from the area or changed to or

always was the client of another provider; Lost to follow-up efforts.

# Immunization Data: Highlights

- Online:
  - [www.sdiz.org](http://www.sdiz.org)
- Prevention & Control Programs:
  - Pertussis awareness campaign in medical communities
- Surveillance:
  - Measles outbreak in early 2008
  - Vaccine adverse event report system
- Special Research Projects:
  - San Diego Hospital Health Care Worker Influenza Immunization Intervention Project
- Planning & Priorities in Regions/County:
  - Disparity, immunize cross life span

# Immunization Data

Questions???



# HIV Counseling and Testing Data

Lorri Freitas, M.P.H.

HIV/AIDS Epidemiology/ Community Epidemiology

# HIV Testing Data: Background

- **Data available since** 1990
- **Data comes from** local county facilities that provide testing, 4-6 month lag, reported annually
- **Database:** Includes occurrence in SD County, most are SD County residents
  - Anyone seeking HIV testing at County or County-contracted test sites (minimum age 12-13 yrs old)
  - Demographic: age, gender, race/ethnicity, zip code (limited) of residence
  - Behavioral: sexual orientation, number of sexual partners, gender of partners, sexual behaviors
  - Testing: reason for testing, number of prior HIV tests, test type, test result
- **Caveat:** Sensitive data – this may limit data availability for less than county-wide data, particularly zip code analysis.



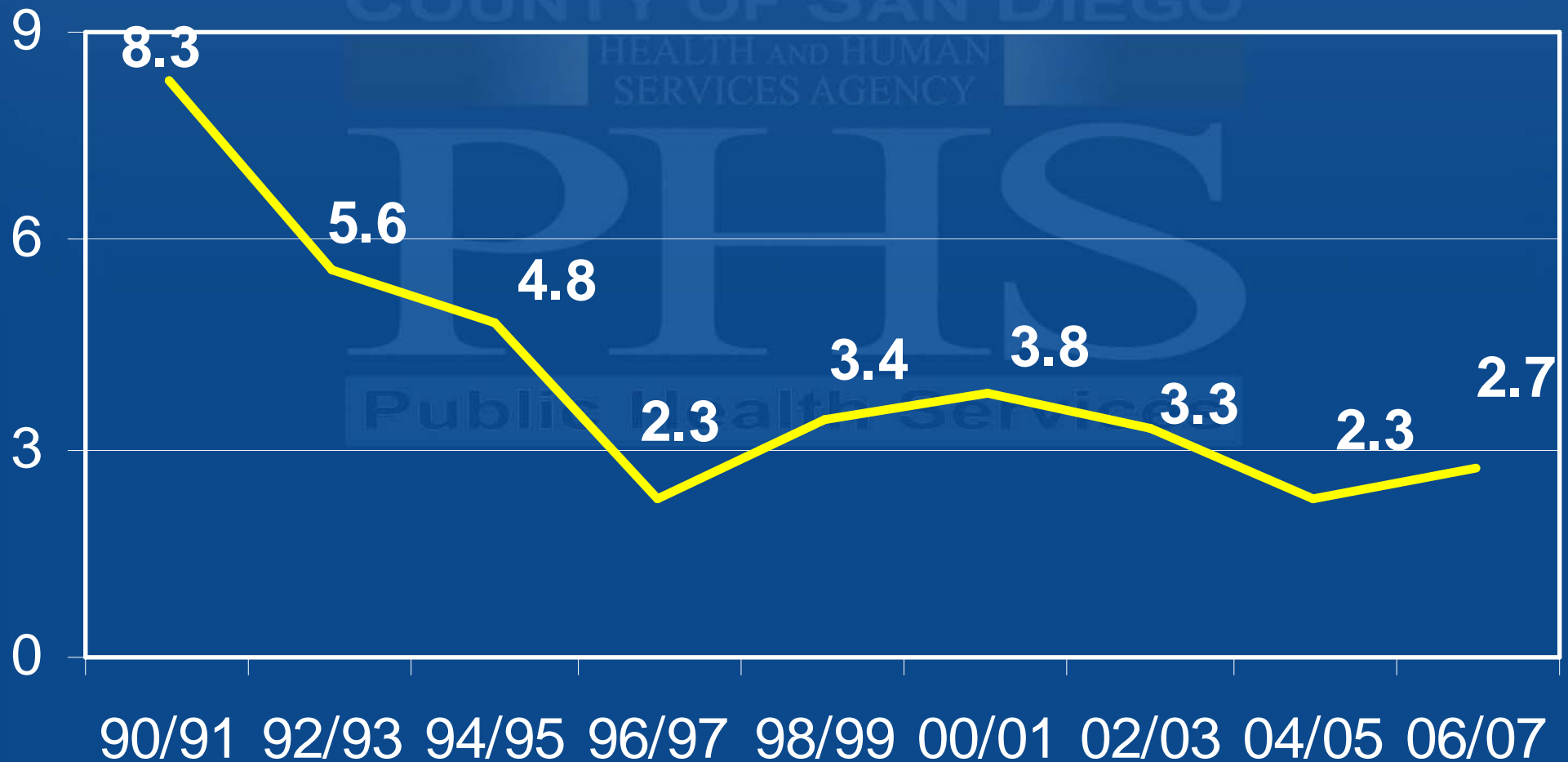
# Example: Young MSM

- Increase in HIV infection rates starting 2001; were young MSM (men who have sex with men) affected here as in other metropolitan areas?
- Looked at data for MSM by age group
- The infection rate for young MSM in SD did not increase as it had in other metropolitan areas

# HIV Anonymous Testing

Rate per 100 MSM Ages 12-24 Testing HIV+

## San Diego County, 90/91-06/07



# HIV Testing Data: Highlights

- Annual report online:
  - [www.sdhivaids.org](http://www.sdhivaids.org)
- Prevention & Control Programs:
  - Outreach to high risk groups (at clubs, community events, support groups)
- Surveillance:
  - High risk populations
  - Changes in modes of transmission
  - Service patterns
- Special Research Projects:
  - African American Action Plan
  - Latino Action Plan
- Planning & Priorities in Regions/County:
  - South and Central Region
  - Hispanic and African American men (mostly MSM)

# HIV Testing Data

Questions???



# HIV/AIDS Reporting System (HARS) Data

Samantha Tweeten, Ph.D., M.P.H.

HIV/AIDS Epidemiology/ Community Epidemiology

# HIV/AIDS Data: Background

- AIDS data available since 1981
- State mandated reporting
  - Mandatory reporting from providers and labs
  - Up to 1 month delay possible but...
    - Cases continue to be reported long after diagnosis
- Cases include:
  - Any San Diego County resident diagnosed in San Diego County. San Diego County residents diagnosed elsewhere may be included
    - All HIV cases reported after 4/17/06
    - All AIDS cases reported after 1981
  - Demographics, region or zip code (limited) of residence
  - Risk group/Patient history
  - Laboratory data
  - Opportunistic infection data
- Recent changes in HIV reporting may delay data availability
  - AIDS data unaffected

# Example: Epidemiologic Profile

- **Data Request:**

- HSHB (HIV, STD & Hepatitis Branch) requests an epidemiologic profile of the epidemic in San Diego County

- **Product:**

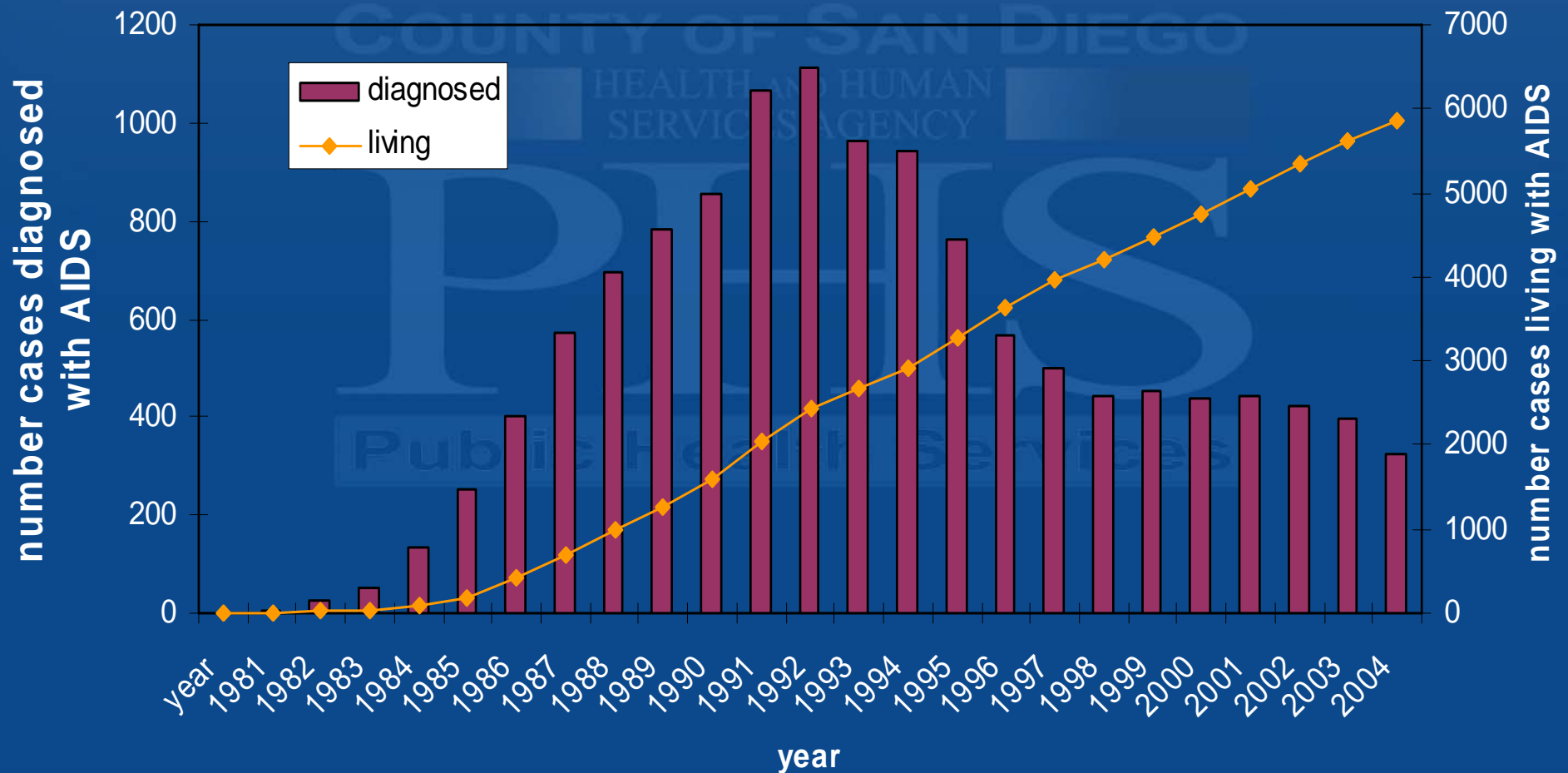
- Report produced including HHSA regions, demographics, mode of transmission, etc. to fully describe the epidemic in San Diego County

- **Result:**

- Epi Profile goes into the HSHB Comprehensive Plan
  - Used to determine where care and services should be concentrated

# HIV/AIDS Data: Example

## Living and Diagnosed AIDS Cases





# HIV/AIDS Data: Highlights

- Annual report online:
  - [www.sdhivaid.org](http://www.sdhivaid.org)
- Provide data to internal and external customers
  - Community care providers, HIV Planning Council
  - For grant proposals, community planning, etc.
- Surveillance
  - Determining increases in specific groups
- Special Reports
  - AIDS in Hispanics, AIDS in Women, etc.

# HIV/AIDS Reporting Data

Questions???



# Sexually Transmitted Disease (STD) Data



Marjorie Lee, M.P.H.

HIV/STD/Hepatitis Branch

# STD Data: Background

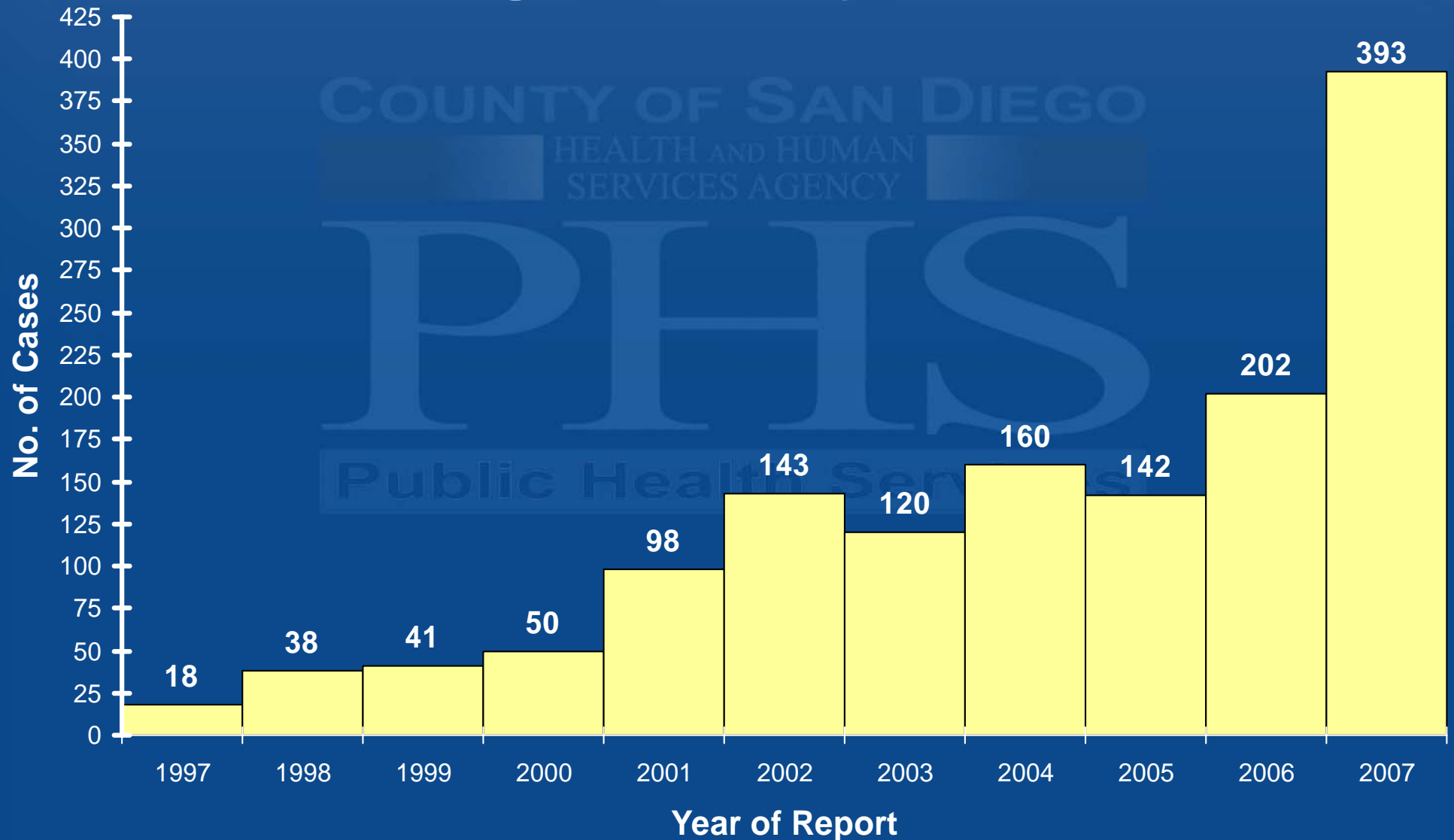
- **Data available since** 1986 for chlamydia & gonorrhea, 1992 for syphilis
- **Data comes from** state mandated reporting by providers and laboratories. Data available 4 months after end of calendar year
- **Database contains:** All reported cases of syphilis, gonorrhea and chlamydia from providers and laboratories in San Diego County
  - Number of cases
  - Demographics: age, gender, race/ethnicity, zip code
- **Caveat:** Data on race/ethnicity and zip code of residence are often missing

# Example:

## Gonococcal (GC) Infections

- Clinicians at County STD clinics noticed numerous rectal and pharyngeal GC infections among males
- Looked at gonorrhea data to see if this was the case
- Data showed that there were a number of rectal or pharyngeal GC positive cases among men seen at County STD clinics.
  - At private providers usually only urethral screening is done
  - It was estimated that 1/3 of rectal/pharyngeal GC cases would be missed if only a urethral test were done.
- Recommendation was made to physicians to screen for rectal and pharyngeal GC in men who report exposure or at minimum to presumptively treat if a test is not done. Presumptive treatment is particularly important for patients seen by private providers where testing of rectal sites by culture is done infrequently.

# Reported Rectal or Pharyngeal GC Infections, Males, San Diego County 1997-2007



# STD Data: Highlights

- Annual Fact Sheet online:
  - <http://www2.sdcounty.ca.gov/hhsa/ServiceCategoryDetails.asp?ServiceAreaID=105>
- Prevention & Control Programs:
  - STD Community Interventions Program (SCIP)
- Surveillance:
  - Monitoring of STD rates (CT, GC and syphilis) overall and for specific groups
  - Enhanced Gonorrhea Surveillance
- Special Research Projects:
  - Evaluation of program to re-screen persons who test positive for CT and GC
- Planning & Priorities in Regions/County:
  - Location of STD clinics – based on STD rates

# STD Data

Questions???





# Tuberculosis (TB) Case Database



Chris Kozik

Tuberculosis Control

# TB Data: Background

- **Data available since 1993**
- **Data comes from**
  - Initially, mandatory report by providers and laboratories
  - Complete case report based on medical records and patient interview
  - Case confirmed using CDC surveillance case definition for TB
- **Database contains:**
  - New confirmed cases of TB in San Diego County
  - Demographics
  - Clinical presentation and drug resistance
  - Risk factors (e.g., drug use, homelessness)
  - Treatment outcome
- **Caveats:**
  - Does not include non-reported cases of TB
  - Small numbers may limit reporting of data less than county level

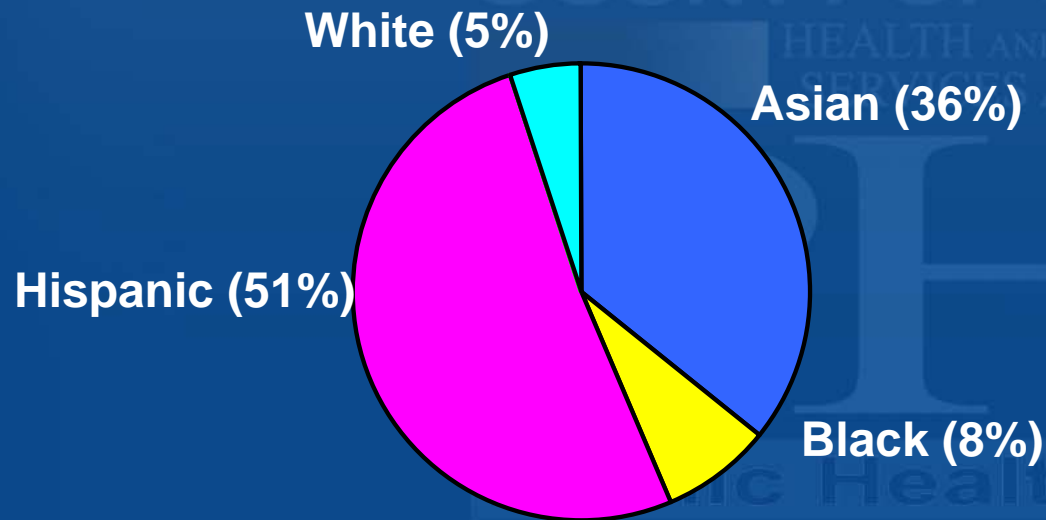
# Example: TB

- Case reporting depends on access to medical care
- Case data: >50% of TB cases occur in Hispanics
- Developed pilot targeted media outreach project
- High yield case finding activity
- Incorporated media campaign into program routine

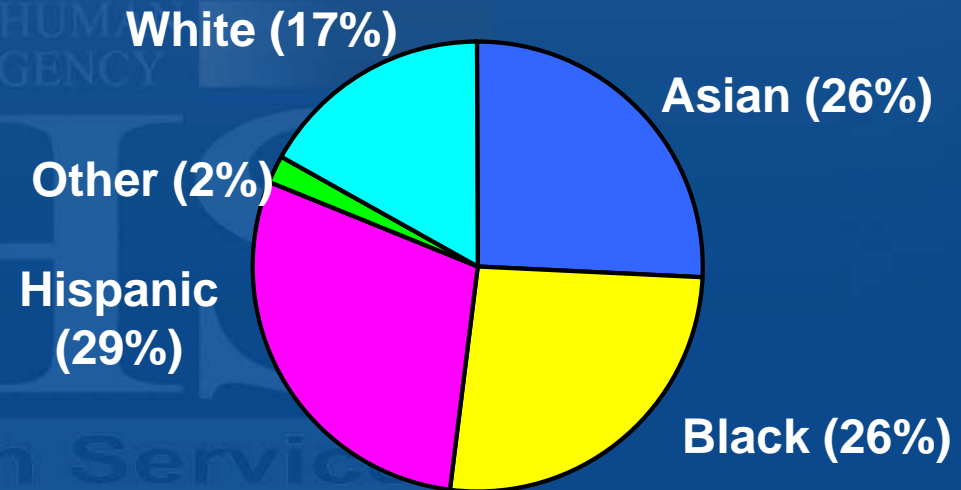
# Reported TB Cases Race/Ethnicity

## San Diego County vs. U.S., 2007

### San Diego



### United States



\*All races are non-Hispanic.

\*\*Other includes American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander and persons reporting two or more races.

U.S. data for 2007: provisional

# TB Data: Highlights

- Fact sheet, trend tables, annual report online:
  - [www.sandiegotbcontrol.org](http://www.sandiegotbcontrol.org)
- Prevention & Control Programs:
  - Evaluate success of control efforts
  - Plan targeted control and prevention interventions
- Surveillance:
  - TB case rate decreasing, 2003-2007
  - More than 50% of cases occur in Hispanics
- Special Research Projects:
  - Frequent participant in multi-center studies with CDC and state
  - Recent studies include
    - Missed opportunities for prevention in children
    - Epidemiology of TB among foreign-born persons
- Planning & Priorities in Regions/County:
  - Staffing redesign in 2007
  - Education efforts to high-risk populations and facilities

# TB Data

Questions???



# Childhood Lead Poisoning Prevention Program (CLPPP) Lead Data



Lacey Hicks, M.P.H.

Community Epidemiology

# Lead Data: Background

- **Data available since 1992**
- **Data comes from:**
  - Mandatory laboratory reporting to state. Data returned to local CLPPP programs the month after receipt
  - RASSCLE database which contains managed case data
- **Database contains:**
  - All San Diego County children under 21 years of age who have been tested for blood lead levels
  - Demographics including age, gender, race/ethnicity, address\*
  - Blood lead levels, sample type, healthcare provider
  - Possible sources of exposure (for managed cases)
- **Caveats:** Reporting is NOT complete, i.e. not all children are tested for lead poisoning. Laboratory reporting is not standardized.

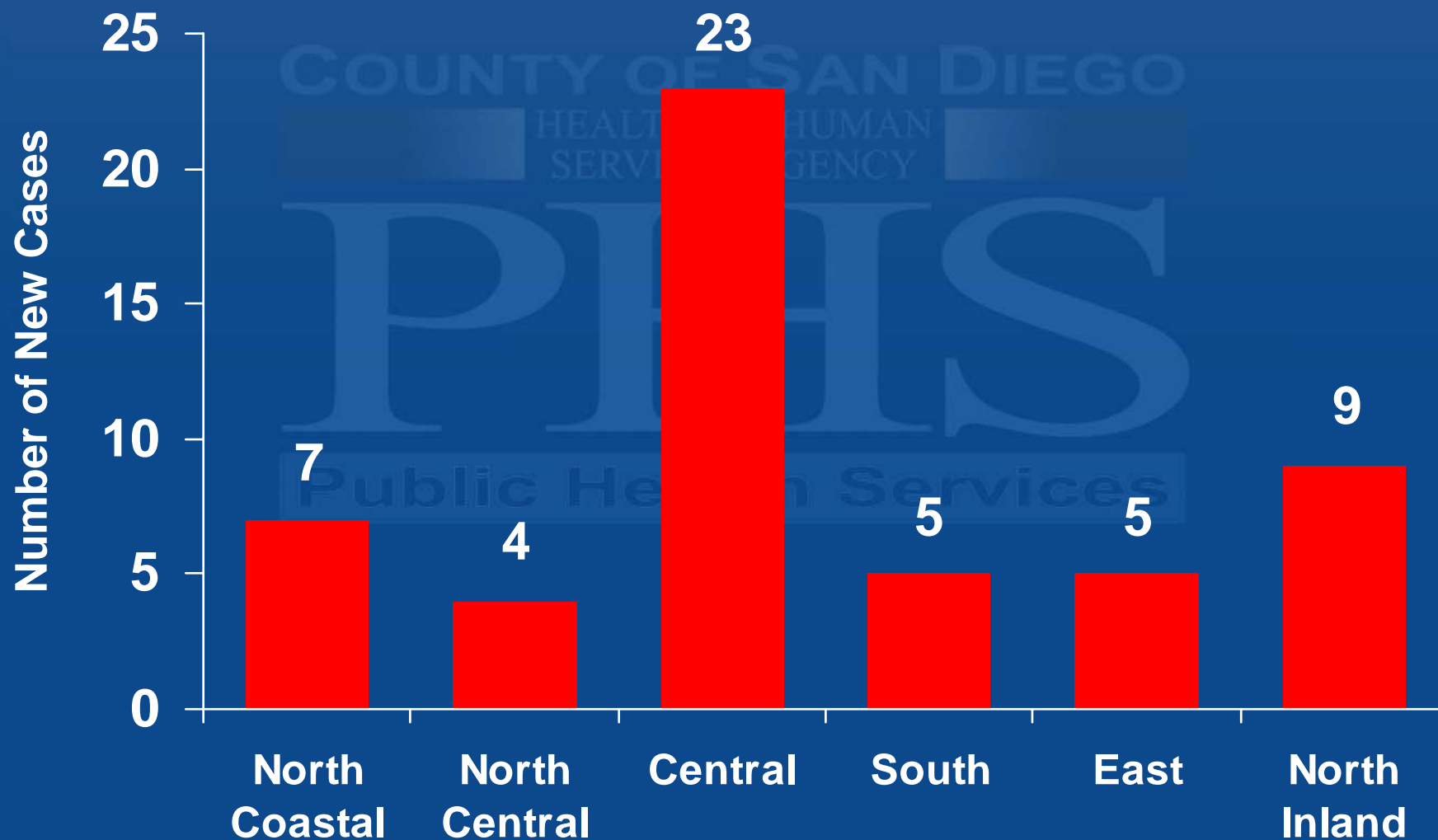
*\*addresses are not available to public*



# Example: Managed Lead Poisoned Cases

- Highest number of lead poisoned children live in poor neighborhoods with old housing in need of repair (peeling paint, etc)
- Looked at geographical distribution of 2005 managed cases in San Diego County
- Data show that 23 (43%) managed cases live in Central Region
- Target Central Region for preventive and educational outreach
- Continue to follow latest managed case stats

# Number of New San Diego County Lead Cases (BLL 14.5 ug/dL and Above), by HHSA Region, 2005



# Lead Data: Highlights

- Online:
  - Local: <http://www2.sdcounty.ca.gov/hhsa/ServiceDetails.asp?ServiceID=147>
  - CA State: <http://www.dhs.ca.gov/childlead/>
- Prevention & Control Programs:
  - Educational outreach to low income families with young children
  - Healthcare provider education and training
  - Reduction of environmental lead hazards programs
- Surveillance:
  - Quantity and levels of lead tests ordered each month
  - Follow which healthcare providers order lead tests
  - Follow possible sources of lead exposure trends
- Special Research Projects:
  - Early Prevention Program (EPP): Home visitation to families with children whose blood lead levels are below State case definition
- Planning & Priorities in Regions/County:
  - CLPPP program activities are based on feedback from lead data

# Lead Data

Questions???



# Reportable Disease Data



Deirdre Browner, M.P.H.

Community Epidemiology

# Reportable Disease Data: Background

- **Data available since** 1993 (similar data since 1987 in a different format)
- **Data comes from** mandatory reporting by providers and laboratories
  - Submitted as the case is diagnosed or up to 7 days after diagnosis depending on the diagnosis
  - Submitted directly to Public Health via phone, fax, mail or electronically using web-based reporting or automatic electronic laboratory reporting.
- **Database contains**
  - Any individual who has been diagnosed with a reportable disease in San Diego County and whose healthcare provider or lab submitted a Confidential Morbidity Report (CMR) to Public Health
  - Reportable diseases include infectious diseases (i.e. E.coli, measles), and poisoning from marine toxins (ciguatera, shellfish poisoning)

# Reportable Disease Data: Background (continued)

- **Database contains**
  - Demographics: age, gender, race/ethnicity, zip code of residence
  - Disease, risk factors, date of diagnosis, lab test results
  - STD and TB reports are handled by those respective Branches within Public Health Services
- **Caveat:** Not all reportable diseases are diagnosed or reported, the patient must visit a health care provider and the provider must submit a Confidential Morbidity Report to be included in dataset. Noninfectious reportable diseases and conditions are reported on CMR, but not maintained by HHSA in this dataset.

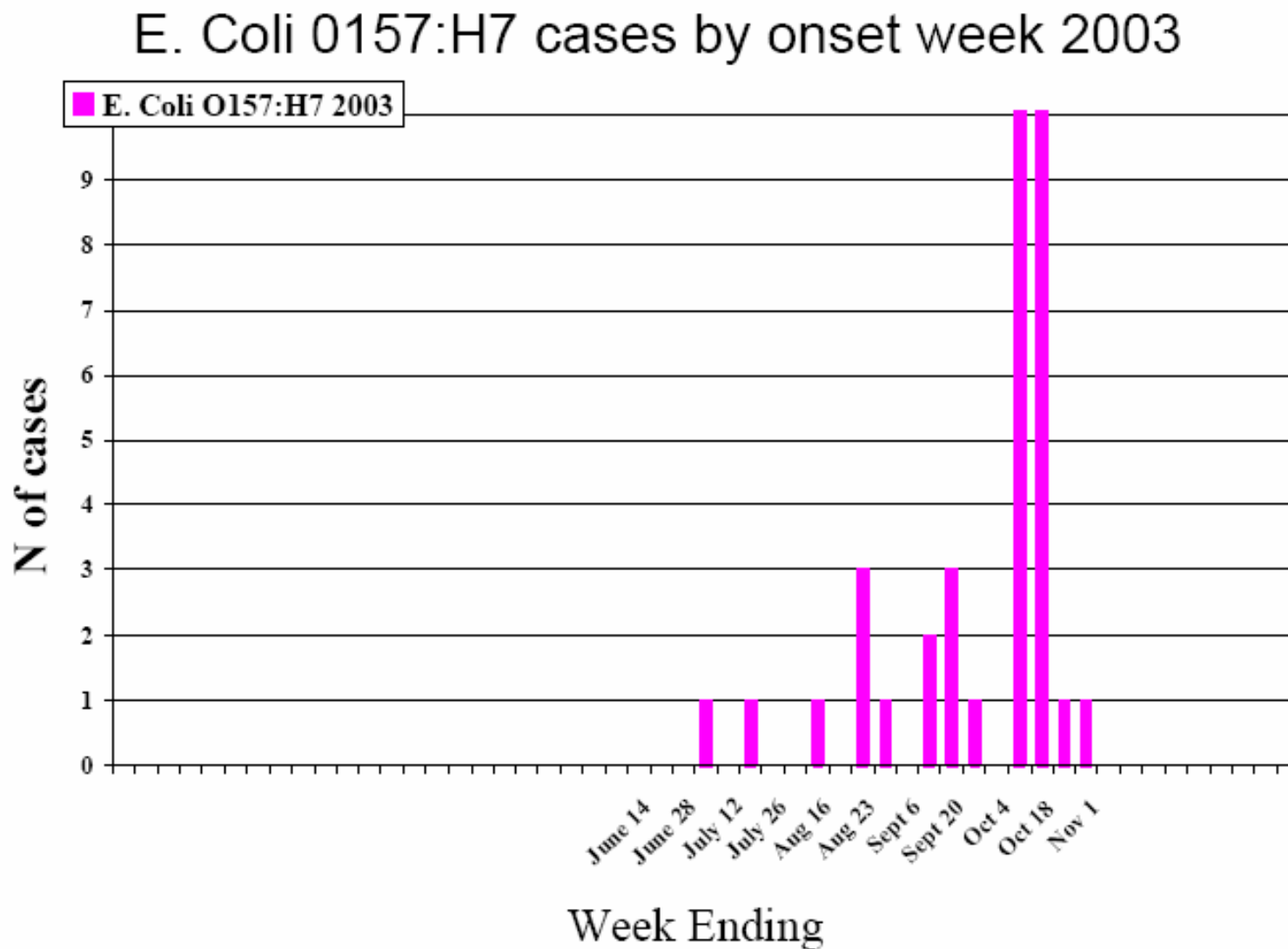
# Example:

## *E coli* O157:H7 Outbreak

- 5 cases were reported to Community Epidemiology over a 3 day period
- The number of cases was well in excess of expected cases for a single week. Community Epidemiology began a foodborne outbreak investigation in conjunction with California Department of Public Health (CADPH, formerly CA Dept of Health Services).
- Investigation revealed an association with eating at a local restaurant. Epidemiology contacted Department of Environmental Health Food and Housing Branch. Implicated food items narrowed to lettuce used in several salads. Restaurant stopped serving lettuce and changed vendors. State began traceback investigation to determine source of contamination.
- In San Diego County close to 40 people were sickened. No cases occurred after the Restaurant stopped serving the implicated lettuce.



# Reportable Disease Data: E. Coli O157:H7 outbreak 2003



# Reportable Disease Data: Highlights

- Annual tables and reports online:
  - [www.sdepi.org](http://www.sdepi.org)
- Prevention & Control Programs:
  - Hand Hygiene for preschools
  - Disease-specific fact sheets focusing on prevention and treatment
- Surveillance:
  - Enteric Disease case rates higher than previous years
- Special Research Projects:
  - 2004 Community-Wide Antibigram
- Planning & Priorities in Regions/County:
  - Implement electronic reporting with healthcare providers and labs
  - Collaborate with state and federal officials on changes in existing reporting regulations

# Reportable Disease Data

Questions???



**- BREAK -**



# Population-based Databases

Public Health Services

# Birth Data



Sutida (Nid) Jariangprasert, M.P.H.

Maternal, Child and Family Health Services

# Birth Data: Background

- **Data available since:** 1990
- **Data source:** State law mandates registration of births. Data are available 6-9 months after end of calendar year.
- **Database contains:**
  - Births to county residents (including occurrence outside the county) and births that occurred in the county
  - Parents' demographics: age, race/ethnicity, education, marital status
  - Fertility rate, teen births, prenatal care, preterm births, low birth weight, method of delivery, plurality
- **Caveat:** only live births included (not all pregnancies)

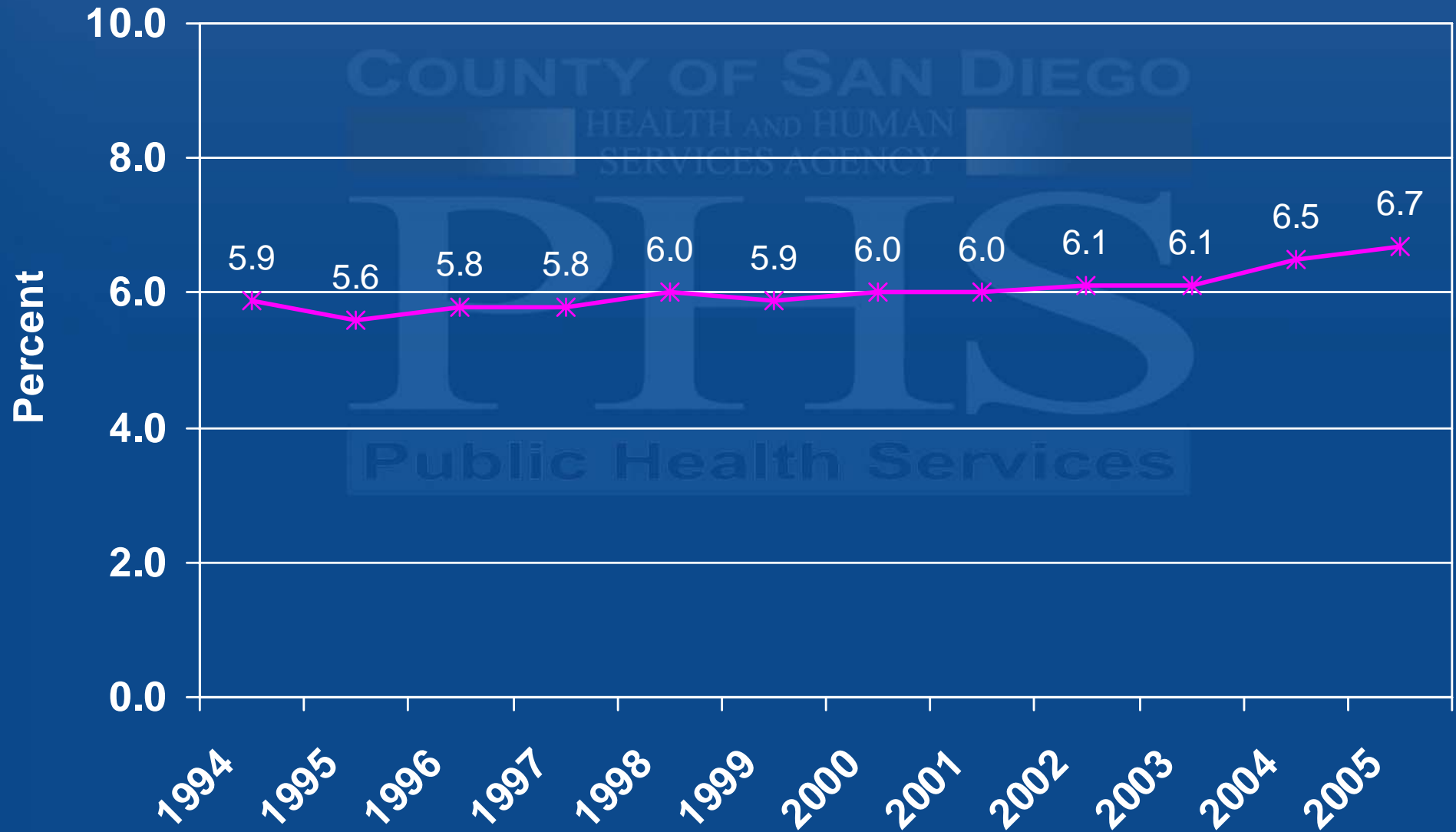
# Example:

## Monitoring Low Birth Weight

- MCFHS works with women, health care providers and other public health groups to improve birth outcomes
- Medical science has advanced
- Is low birth weight decreasing?



# Low Birth Weight San Diego County Residents



# Fetal Death Data



Sutida (Nid) Jariangprasert, M.P.H.

Maternal, Child and Family Health Services

# Fetal Death Data: Background

- **Data available since:** 1989
- **Data source:** State law mandates registration of fetal deaths. Data are available about 9 months after end of calendar year
- **Database contains:**
  - All deaths prior to birth (beyond 20<sup>th</sup> week of gestation)
  - Fetal deaths among county residents (including occurrence outside the county) and deaths that occurred in the county
  - Parents' demographics: age, race/ethnicity, education
  - Fetal mortality, prenatal care, delivery method, length of gestation, birthweight, gender, cause of death
- **Caveat:** Reporting is not complete

# Example:

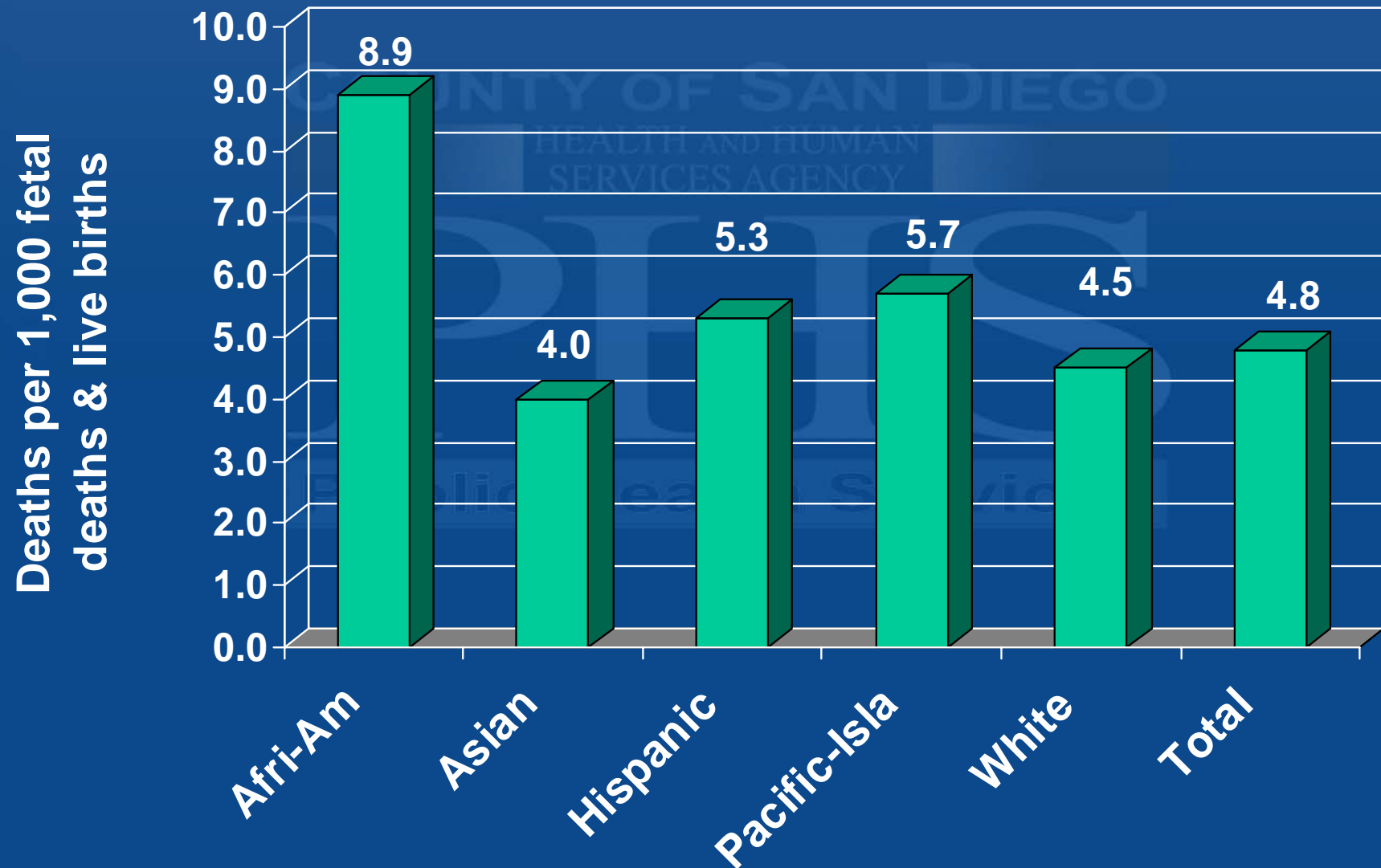
## Fetal Deaths

- Race/ethnic disparities in many health issues
- Is there a disparity in fetal deaths?
- Are there certain groups MCFHS should focus intervention efforts on?

Public Health Services

# Fetal Mortality by Race/Ethnicity

## San Diego County Residence, 2003-05



# Infant Death Data



Sutida (Nid) Jariangprasert, M.P.H.

Maternal, Child and Family Health Services

# Infant Death Data: Background

- **Data available since 1990**
- **Data source:** State law mandates registration of deaths. Data are available 9-12 months after end of calendar year.
- **Database contains:**
  - Deaths among county residents (including occurrence outside the county) and deaths that occurred in the county
  - Infants' demographics: age, race/ethnicity, gender
  - Topic Specific: infant mortality (including neonatal, postneonatal), cause of death
- **Caveat:** Misreporting of information, e.g. race/ethnicity.

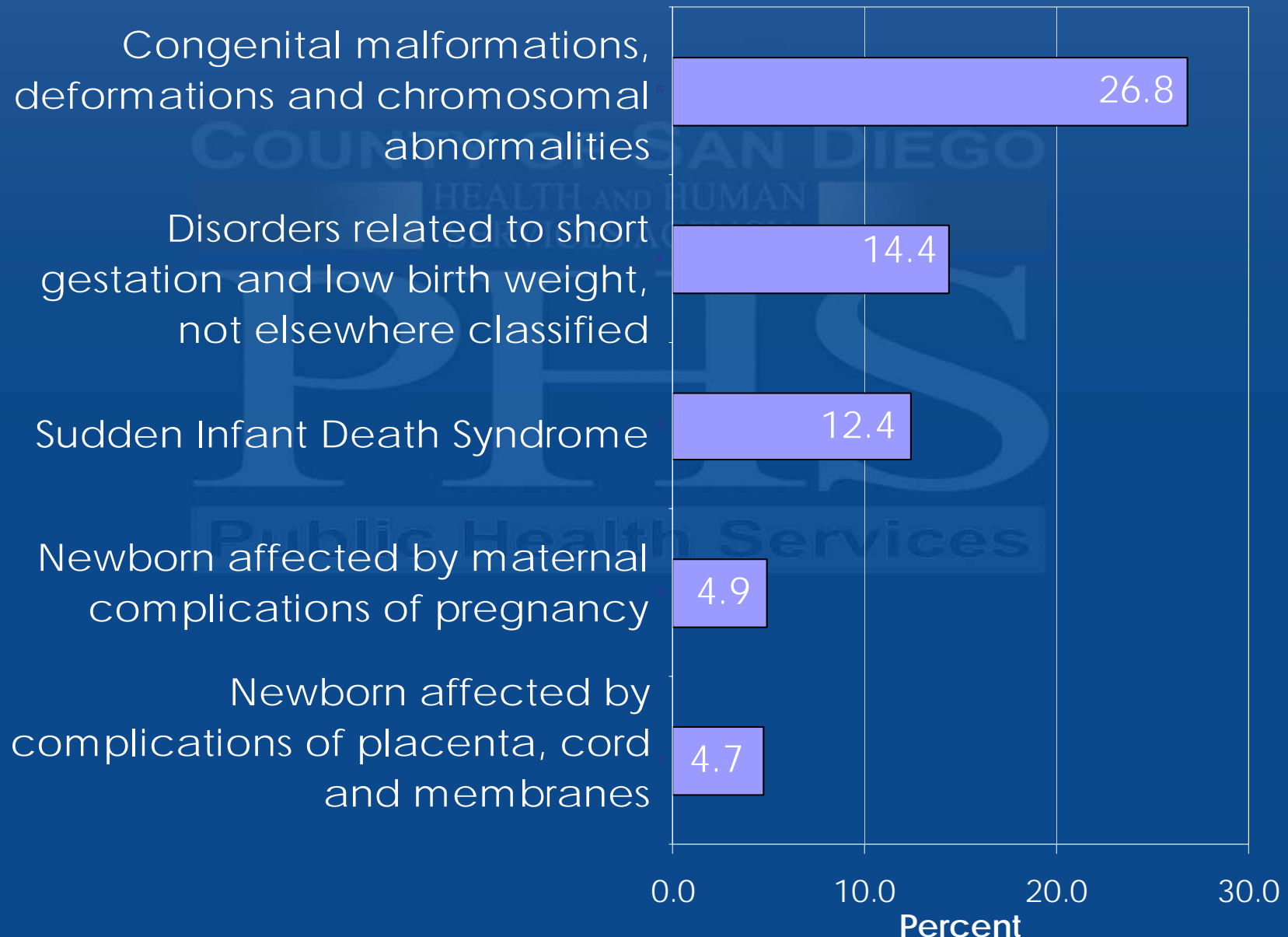
# Example:

## Infant Mortality

- Do our prevention efforts match what is happening in actuality?
- It would be useful to know: what are the leading causes of death?
- Can we reduce the risk of dying from any of the causes?



# Leading Causes of Infant Death, 2002-2004, San Diego County Residence



# MCFHS Data – Highlights

- **Prevention & Control Programs:**
  - Perinatal Care Network (PCN)
  - San Diego Kids Health Assurance Network (SD-KHAN )
  - Dental Health Initiative/Share the Care
  - Black Infant Health (BIH) Program
- **Surveillance:**
  - Fetal and Infant Mortality Review (FIMR) Program
- **Special Research Projects:**
  - Improving documentation of BMI among CHDP providers

# **MCFHS Data**

## **(births, fetal and infant mortality)**

Questions???



# Death Certificate Data



Jennifer Nelson, M.P.H.

Community Epidemiology

# Death Data: Background

- **Data available since** 1989 (through 2005 currently)
- **Data comes from** mandatory reporting of death certificates
  - Registered at county level then forwarded to state
  - Data file received from CA DHS after processing lag of 1-2 years
- **Caveat:** Only underlying cause of death is available, not additional contributing causes of death

# Death Data: Background

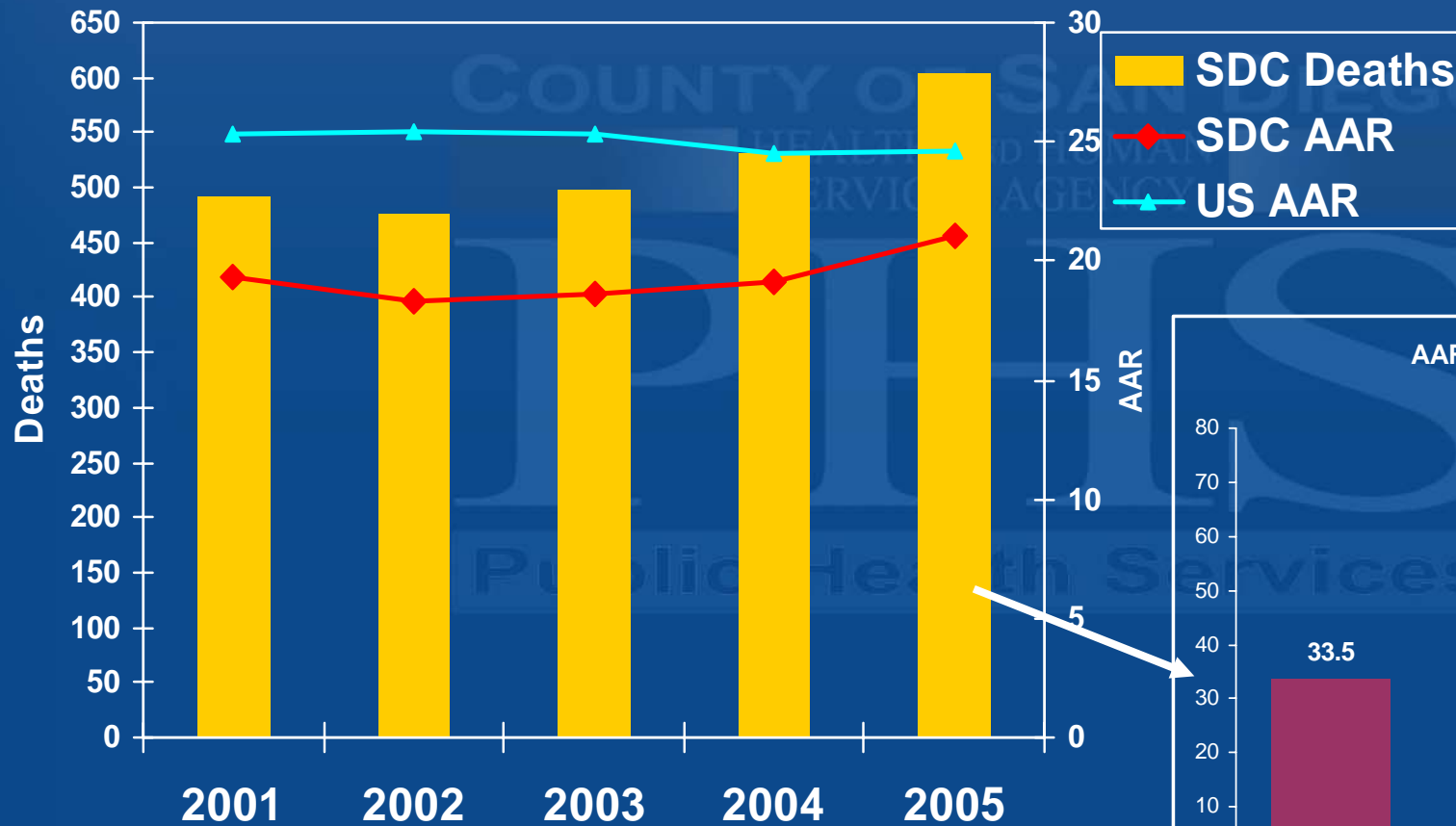
- **Database contains:**
  - All recorded deaths of
    - San Diego County residents
    - Residents of other locales whose death occurred in San Diego County
  - Available variables
    - Demographics: age, race/ethnicity, gender, marital status, education
    - Geography: zip code, city, state of residence
    - Underlying cause of death, date of death, place of death

# Example: Diabetes

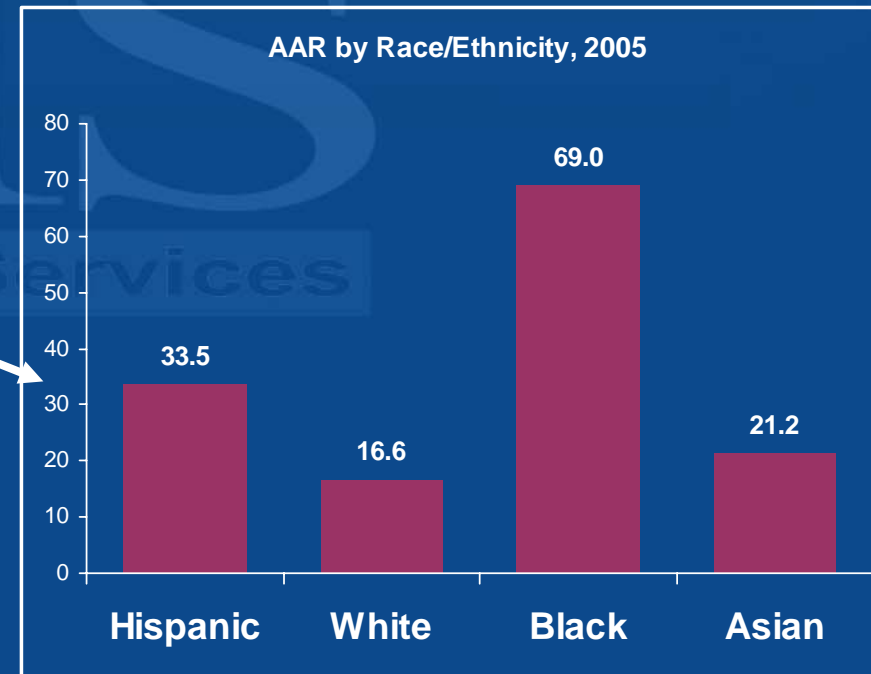
- Nationwide disease burden associated with increasing diabetes prevalence
- Looked at mortality data to see how serious a problem diabetes is in San Diego County:
  - diabetes deaths in San Diego County increased to 604 in 2005 from 491 in 2001
  - 7<sup>th</sup> leading cause of death
  - Age-adjusted rates showed racial/ethnic disparities
- Local community groups use the data to help design programs promoting diabetes prevention and management in affected communities
- County continues to monitor diabetes-related death rates

# Diabetes Deaths, 2001-2005: Counts and Age-Adjusted Rates\* (AAR)

US and San Diego County, 2001-2005



\*Rates are per 100,000 population.





# Death Data: Highlights

- **Annual tables online:**
  - [www.sdepi.org](http://www.sdepi.org)  
(select Epidemiology – Statistics and Reports)
- **Surveillance:**
  - Assess trends in mortality
  - Track deaths attributable to specific causes (including diseases, conditions, accidents, etc.)
- **Prevention & Control Programs:**
  - Determine leading causes of death county-wide and for specific regions and population groups
- **Special Research Projects:**
  - Measure health disparities
- **Planning & Priorities in Regions/County:**
  - Assess the health of the community and measure health outcomes

# Death Data

Questions???



# PreHospital Database



Barbara Stepanski, M.P.H.

Emergency Medical Services (EMS)

# Prehospital Data Background

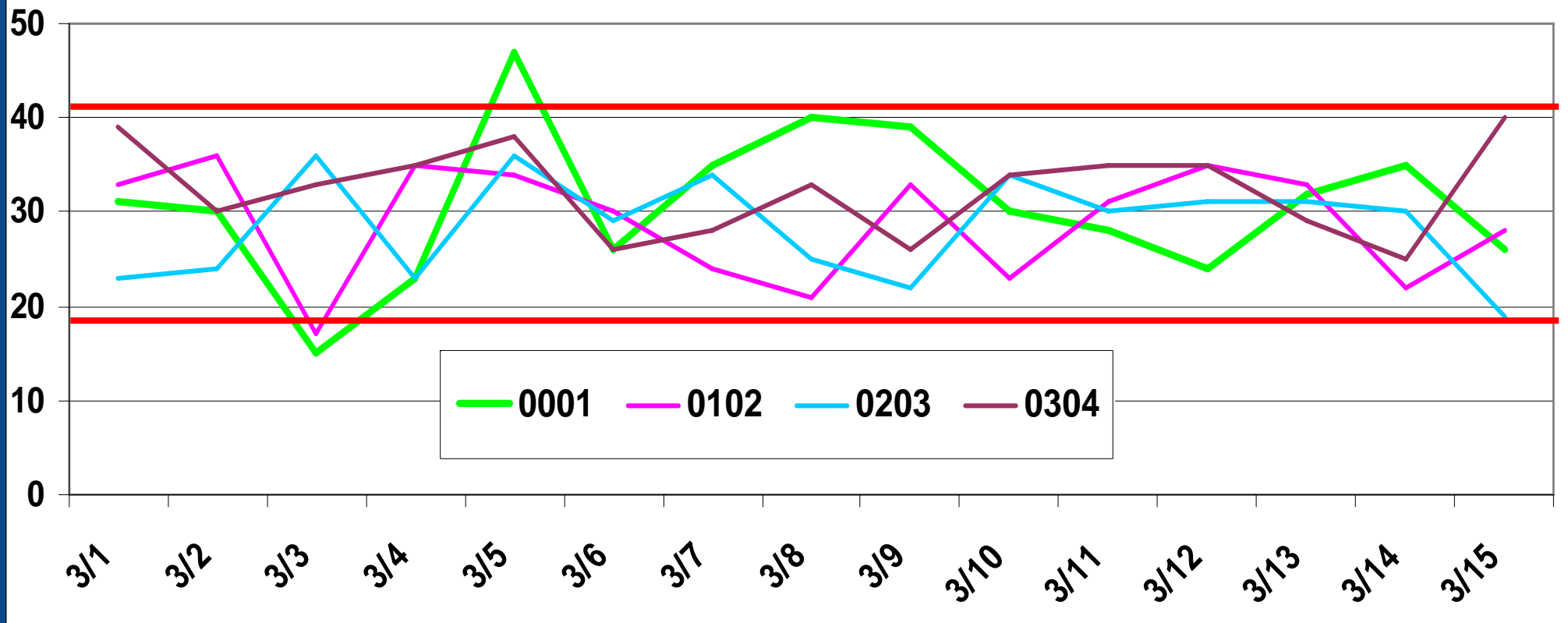
- **Data available since 1997**
- **Data comes from** mandatory reporting County EMS system. Events are reported real time, detail event information several year lag.
- **Database contains:**
  - Prehospital database is population based
  - All patients responded to by Emergency Medical Technicians (EMTs) and/or Paramedics via the 911 system in San Diego County, by zip code of incident
  - Patient information
  - Chief complaint
  - Treatment information
- **Caveat:** Several years lag time for detailed data, which includes zip code.

# Example: Surveillance

- Normal surveillance showed spike in cardiac chief complaints
- Timing: spikes occurred just after school shootings in East County
- Further investigation showed no cardiac peak after “natural” disasters (i.e. fires)
- Future: consider needs/plan for post-traumatic effects of non-natural trauma situation

# Surveillance: Cardiac Chief Complaint

**Chest Pain Cardiac - Chief Complaint**  
**March 1- 15**



# Prehospital Data: Highlights

- Annual report online:
  - [www.SanDiegoCountyEMS.com](http://www.SanDiegoCountyEMS.com)  
(select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Helmet law
  - Child restraint use study
- Surveillance, Regulatory oversight & quality assurance:
  - Heat related incidents
  - Lasix use in prehospital setting
- Special Research Projects:
  - 911 responses for underage alcohol/substance abuse
- Planning & Priorities in Regions/County:
  - Central Region – high rate of pedestrian injuries

# Prehospital Data

Questions???





# Emergency Department (ED) Discharge Data



Holly Shipp, M.P.H.

Emergency Medical Services (EMS)

# ED Data: Background

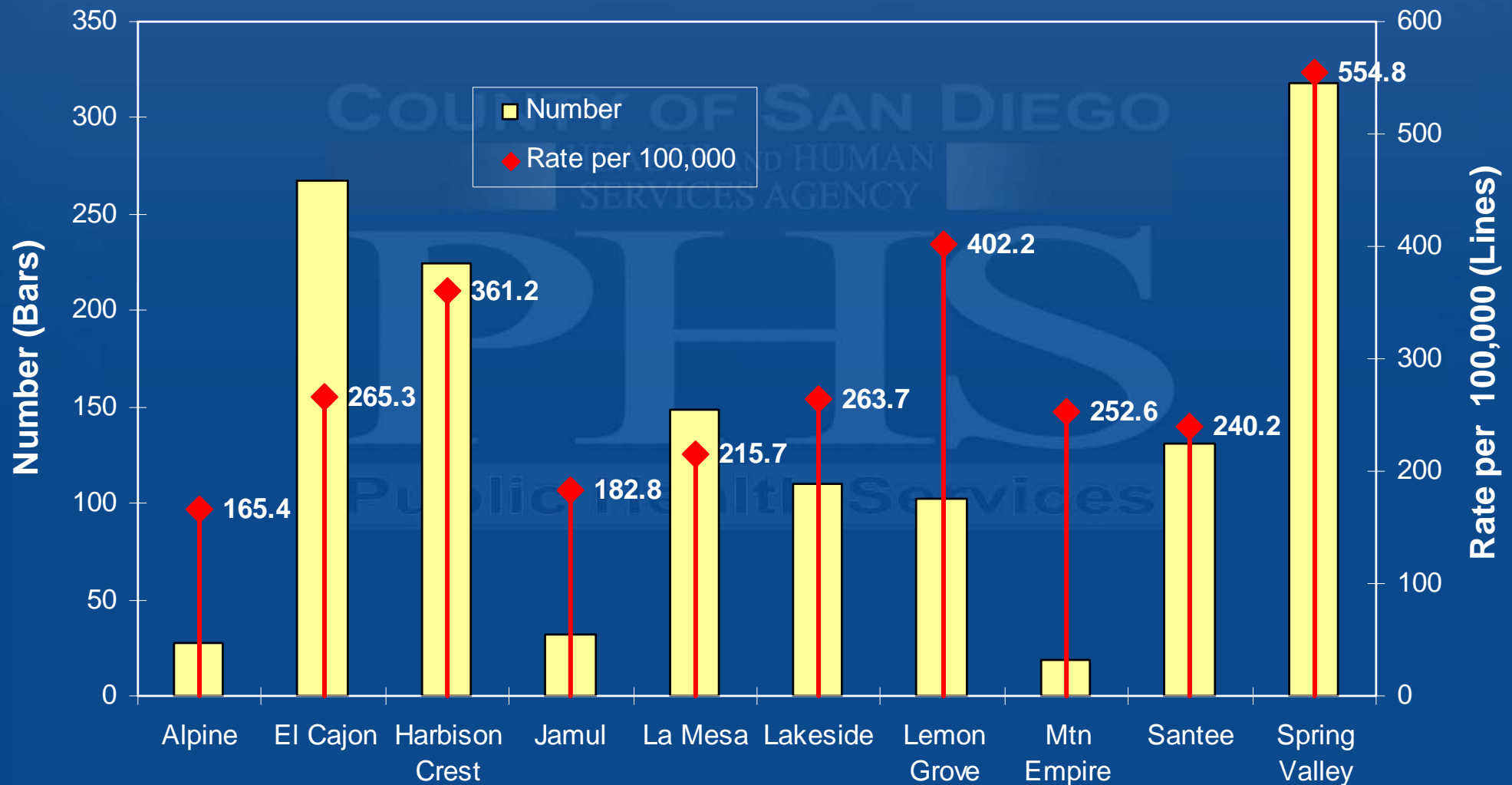
- **Data available since** July 2005 (new local database)
- **Data source:** voluntarily submitted quarterly by participating civilian hospitals, representing 97% of all ED discharges. ~4 month lag for processing.
- **Database contains:** all patients who were treated and discharged from participating EDs in San Diego County
  - Demographic variables: age, race/ethnicity, gender, zip code of residence
  - Service date, patient disposition, expected source of payment
  - Principal & other diagnosis, E-code (mechanism of injury)
- **Caveat:** Does not include patients admitted to hospital from the ED (i.e. most severe cases of illness or injury)

# Example:

## Asthma, HHSA East Region

- A local collaborative is beginning to develop strategies to reduce asthma in the HHSA East Region
- Need to begin by establishing baseline surveillance of asthma within each community
  - Highest numbers in Spring Valley & El Cajon, highest rates in Spring Valley & Lemon Grove
  - Difference apparent by age group
    - Highest rate of ED discharge for asthma among children
    - As a comparison, highest rate of hospitalization for asthma among seniors
- Next, asthma triggers and potential contributing factors can be evaluated within each community

# Number and Rate of Asthma ED Discharges Among HHSA East Region Residents by Community of Residence, 2006



# ED Data: Highlights

- Reports online:
  - [www.sdchip.org](http://www.sdchip.org)
  - [www.SanDiegoCountyEMS.com](http://www.SanDiegoCountyEMS.com)  
(select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Elderly Fall Prevention
  - Childhood Unintentional Injury Prevention
- Surveillance:
  - Diabetes, Asthma, Mental Illness, Substance Use/Abuse
- Special Research Projects:
  - Access to Care for Children
  - Use of the ED for dental-related diagnoses
- Planning & Priorities in Regions/County:
  - San Diego County: ED use by the uninsured

# ED Data

Questions???



# Trauma Registry



Alan Smith, Ph.D., M.P.H.  
Emergency Medical Services

# Trauma Data: Background

- **Data available since 1985**
- **Data comes from** State mandated reporting for trauma facilities, 3 month time lag for reporting.
- **Database contains:**
  - Patients seen at San Diego County Trauma Centers
  - Demographics
  - Zip code of residence, possible zip code of occurrence
  - Event date/time, limited prehospital information, diagnosis, injury E-code, treatment/surgery, survival outcome
- **Caveat:** Highly sensitive data, research requires clearance from hospital IRBs and Medical Audit Committee

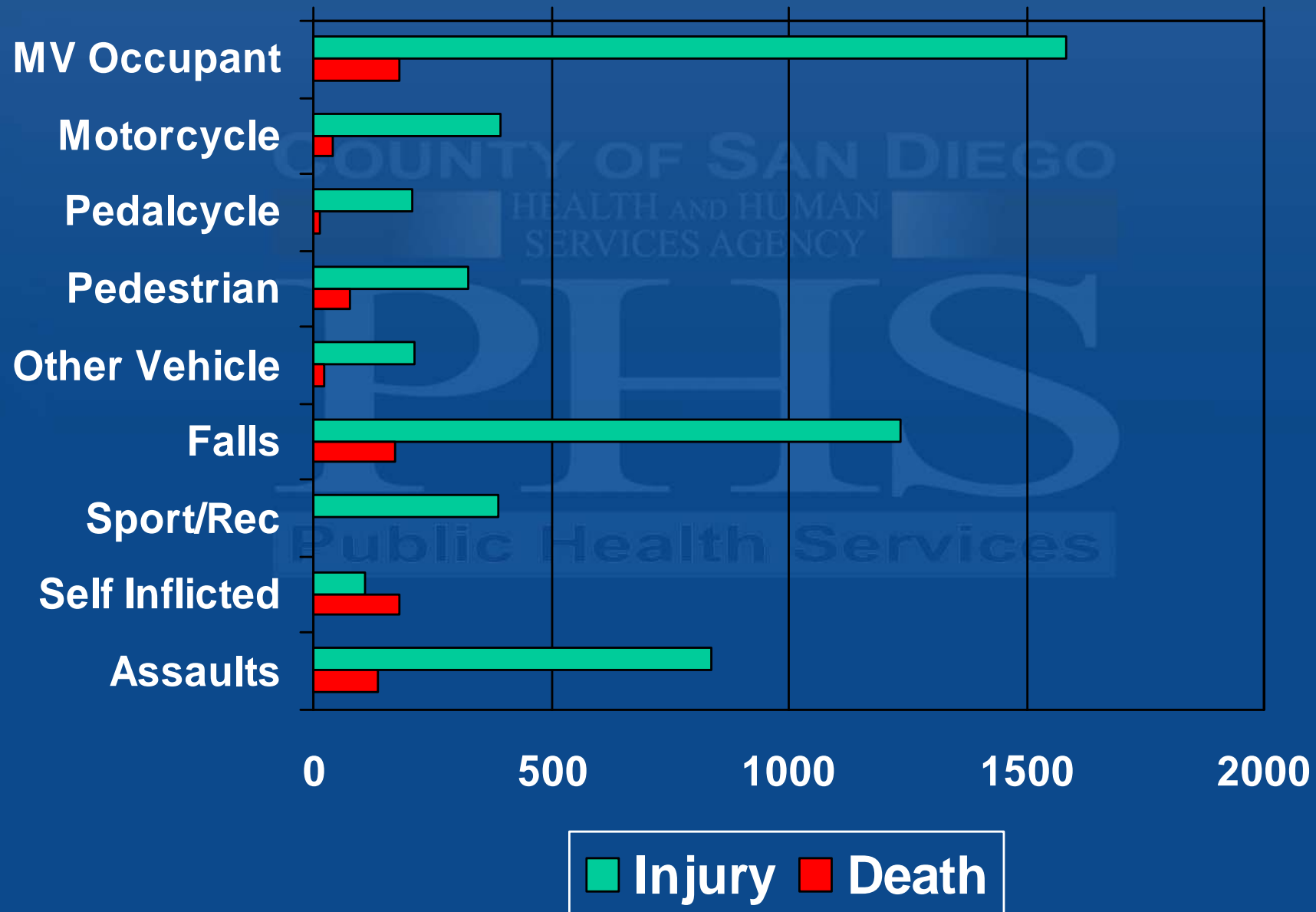


# Example:

## Leading Causes of Injury

- Annual Trauma Report examined leading causes of injury and death due to trauma
- Motor vehicle occupant crashes and falls are the leading causes of injury; joined by suicide as a leading cause of traumatic death
- Community based organizations used this information as a springboard to initiate programs to prevent specific types of injury (e.g., elderly falls, suicide)

# Trauma System Injuries and Deaths by Mechanism



# Trauma Data: Highlights

- Annual report online:
  - [www.SanDiegoCountyEMS.com](http://www.SanDiegoCountyEMS.com)  
(select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Trauma System quality improvement
  - Safe Kids San Diego

# Trauma Data

Questions???



# Hospital Patient Discharge Data



Lacey Hicks, M.P.H.

Community Epidemiology

# Hospital Discharge Data: Background

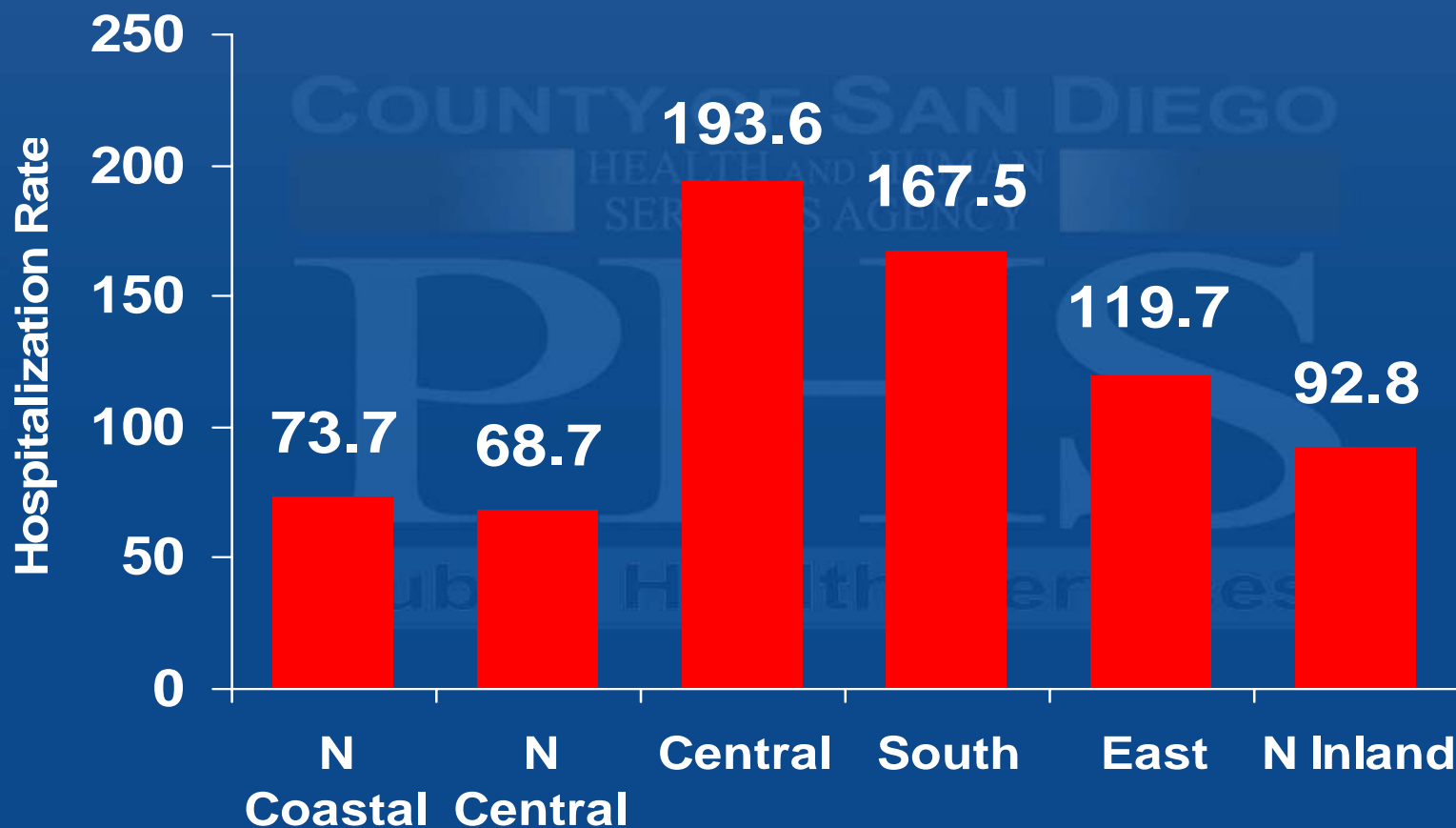
- **Data available since** 1997 (through 2006 currently)
- **Data come from** mandatory reporting to California Office of Statewide Health Planning and Development (OSHPD)
  - Database received from OSHPD after processing lag of 1-2 years
- **Database contains:**
  - Each inpatient discharged from a California licensed acute care hospital in San Diego County
  - Demographics: age, race/ethnicity, gender
  - Geography: zip code of residence
  - Clinical information: diagnosis (ICD-9-CM), injury (E-Codes), length of stay, disposition of patient, total charges, expected source of payment
- **Caveats:** Includes only patients admitted to a hospital licensed by California. 1-2 year lag time for data.

# Example:

## Diabetes Hospitalizations

- HHSA Strategic Plan for FY 2004 – 2009: To promote wellness and self-sufficiency, reduce diabetes-related deaths in all communities
- Look at diabetes-related hospitalization data by HHSA region to help determine where to focus intervention efforts toward reducing life-threatening diabetes
- In 2003, Central Region showed the highest hospitalization rate, followed by South and East Regions
- Focus targeted intervention efforts in the above 3 regions
- Follow-up: Continue to annually monitor diabetes hospitalization rates by region to assess intervention efforts

# Diabetes Hospitalizations Among San Diego County Residents, by HHSA Region, 2003



All rates are per 100,000 population and are adjusted to 2000 Standard US Population

Diabetes includes hospitalizations with a primary ICD-9-CM Code of 250

Source: CA Office of Statewide Health Planning & Development; SANDAG population estimates, rel 7/2004



# Hospital Discharge Data: Highlights

- Annual Tables and Reports Online:
  - Local: [www.sdepi.org](http://www.sdepi.org), (select Epidemiology – Statistics and Reports)
  - California State: <http://www.oshpd.ca.gov/>
- Prevention & Control Programs:
  - Determine leading causes of hospitalizations county-wide and for specific regions and population groups
- Surveillance:
  - Track hospitalizations attributable to specific causes (including diseases, conditions , accidents, etc.)
  - Assess trends in hospitalizations
- Special Projects:
  - Measure health disparities
- Planning & Priorities in Regions/County:
  - Estimate disease/condition burden on community through total charges, length of stay of hospitalizations, and expected source of payment

# Hospital Discharge Data

Questions???



# Medical Examiner (ME) Data



Alan Smith, Ph.D., M.P.H.

Emergency Medical Services

# ME Data: Background

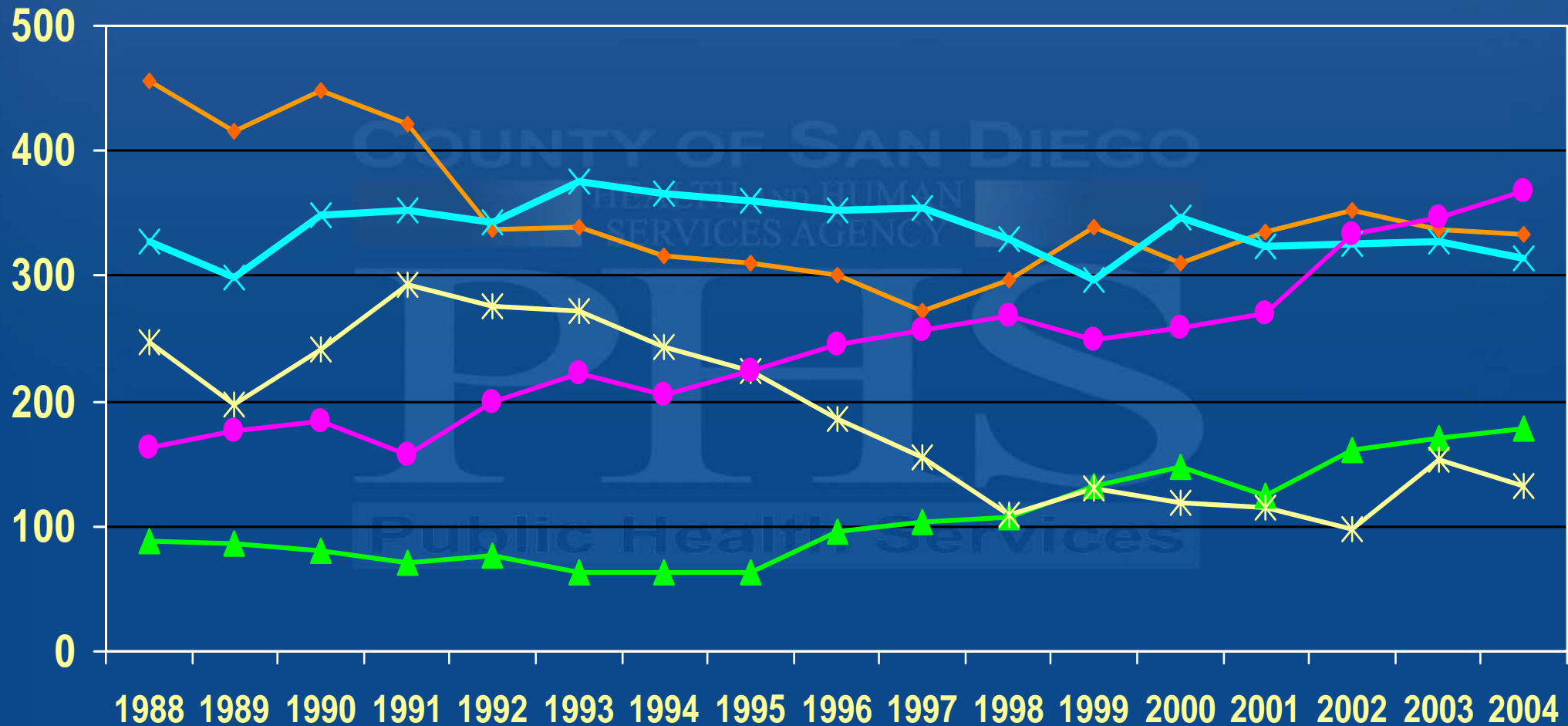
- **Data available since 1988**
- **Data comes from ME office after case closes (6 months)**
- **Database contains:** Non natural deaths occurring in San Diego County
  - Demographics
  - Zip code of residence, Event location
  - Cause of death, investigative report, autopsy, toxicology, pathology, medical/surgical history
- **Caveat:** Does not include SD county residents who died elsewhere, but does include residents of other areas who died here. Law enforcement may seal records still under investigation, sometimes for several years.

# Example:

## Cause of Non-Natural Death Trends

- ME noticed large number of suicides
- Reviewed data to see if it supports the “anecdotal trend”
- Suicide was the leading cause of non-natural death from 1992 through 1998
- CHIP formed a committee to focus on suicide prevention
- Increased resources for suicide prevention

# ME Data: Cause of Death by Year, 1988 - 2004



Motor Vehicle Related   Falls   Suicide   Homicide   OD/Poisoning

# ME Data: Highlights

- Annual reports online, Trauma & Suicide:
  - [www.SanDiegoCountyEMS.com](http://www.SanDiegoCountyEMS.com)  
(select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - CHIP Suicide Prevention workgroup
- Surveillance:
  - Trauma-related deaths – bimonthly report to MAC
- Special Research Projects:
  - Motor Vehicle Occupant death rate change following primary seat belt law
  - Food-related asphyxiation deaths in adults
- Planning & Priorities in Regions/County:
  - Central Region – high rate of suicide

# Medical Examiner Data

Questions???





# Useful Non-Health Data

Public Health Services

# SANDAG Demographic Data



Sarah Hinton

SANDAG

# SANDAG Background

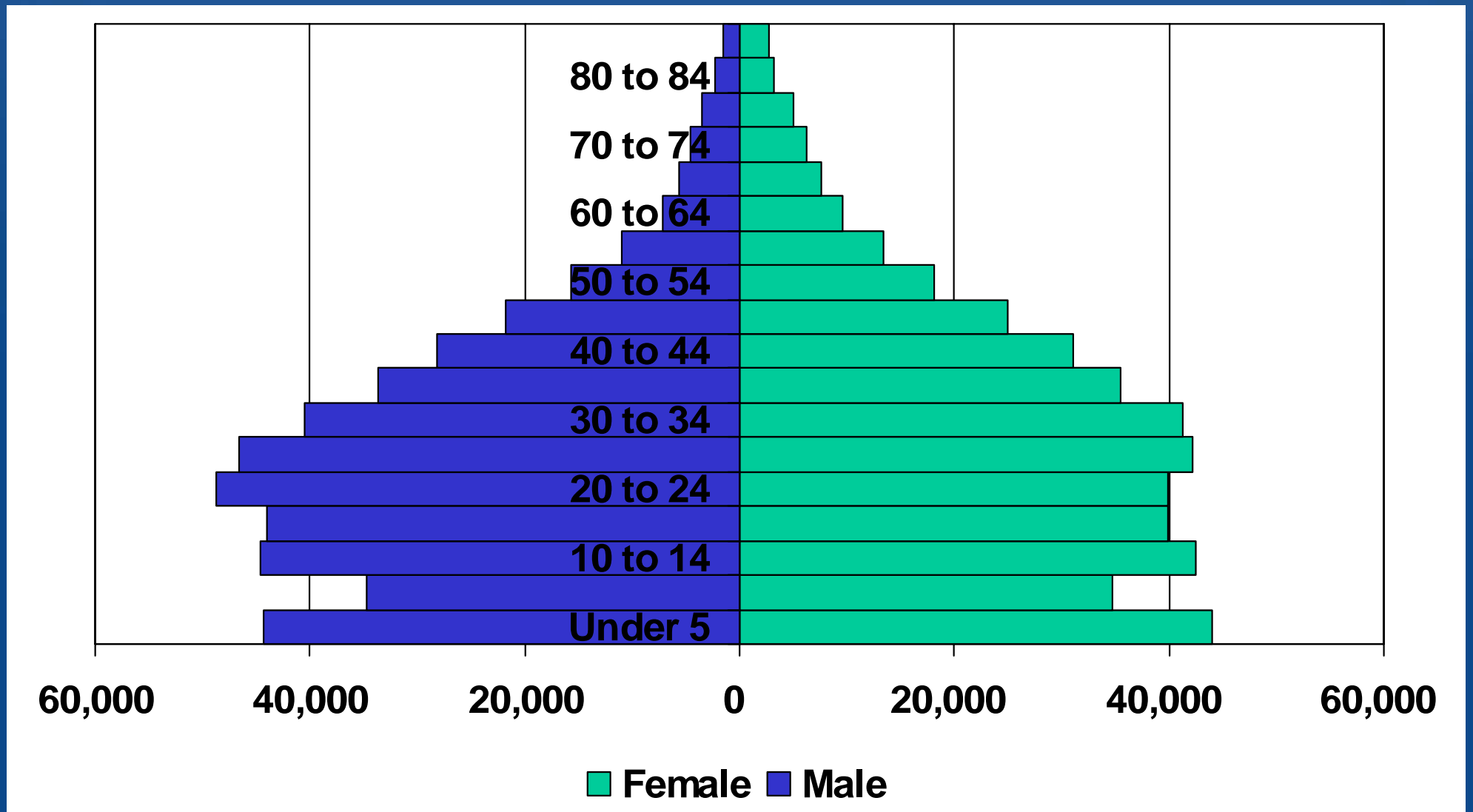
- San Diego Association of Governments
- Purpose of SANDAG
  - Forum for regional decision making
  - Provide population size and demographics to predict resource needs
  - Used to calculate rates which are necessary to compare health issues over time and to track population trends
- Types of programs SANDAG is involved in
  - Regional Transportation Plan, Criminal Justice Clearinghouse, Energy, Demographic and Economic Forecasts, Service Bureau, Public Involvement

# SANDAG Data Background

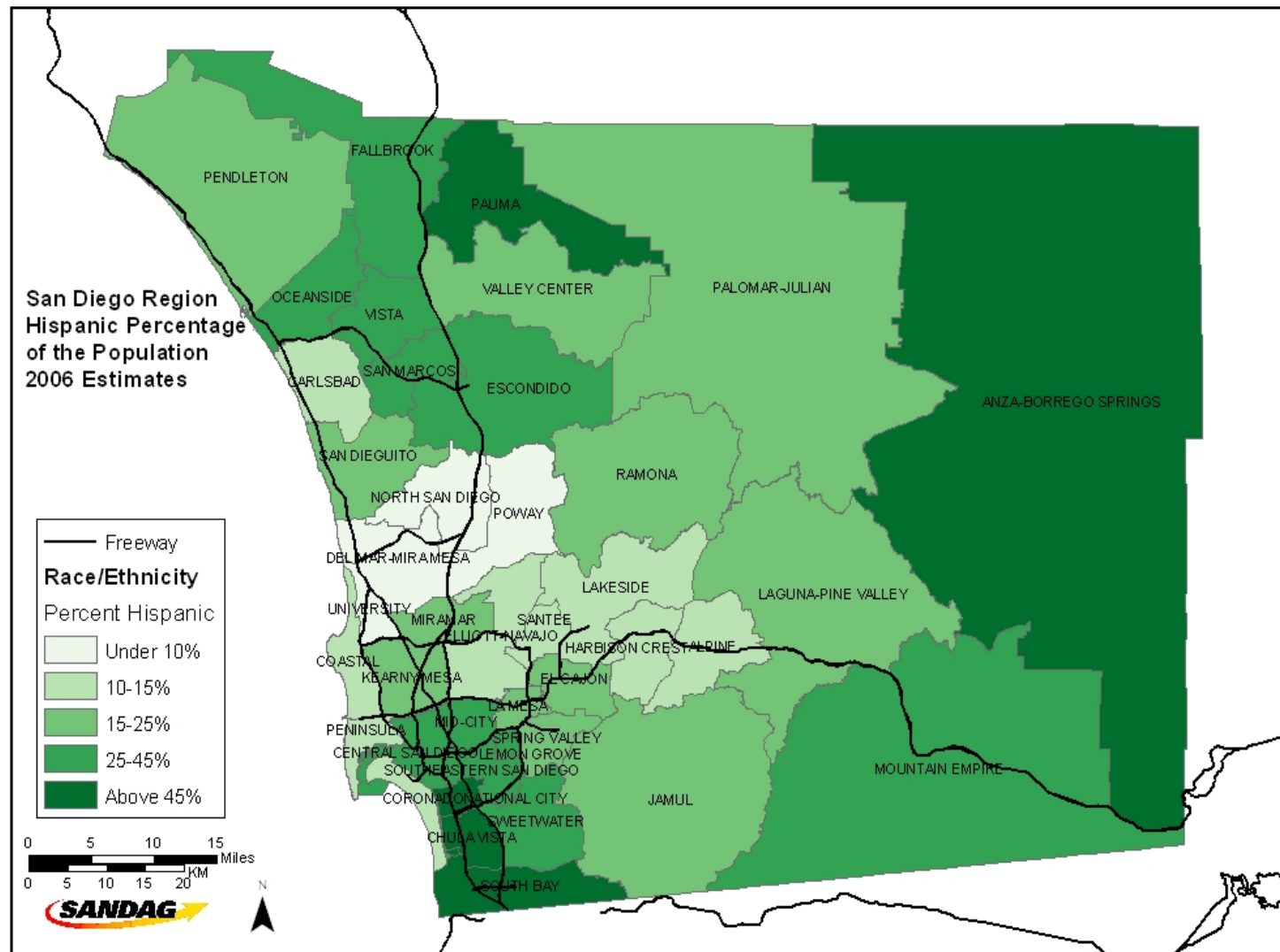
- **Data available for** 2000, current estimate, forecast to 2030
- **Data comes from** Census, CA Dept. of Finance, Employment Development Dept., County Assessor, local jurisdictions, in-house estimates and forecasts. Typically a 6-month to one-year lag.
- **Database contains:** SD region population: individuals, households, housing units, jobs
  - Demographics: age, race/ethnicity, gender
  - SES Characteristics: occupation, education, housing characteristics, income and poverty, family structure, household characteristics
  - By various geographic units: census tract, city, zip code, SRA, county
- **Caveat:** Not all data available for all geographic areas or for all years.

# Example:

## Hispanic Population by Age



# Hispanic Population Concentrations in San Diego Region



# SANDAG Data: Highlights

- Online
  - Data: [www.sandag.org/datawarehouse](http://www.sandag.org/datawarehouse)
  - Reports: [www.sandag.org/profilewarehouse](http://www.sandag.org/profilewarehouse)
- Planning & Development
  - Expanding amount of data available at parcel level
  - Incorporating American Community Survey data
- Population Estimates
  - Rate calculations
- Other
  - Grant applications
  - Special tabulations and custom requests available through SANDAG's Service Bureau

# SANDAG Data

Questions???





# Automated Regional Justice Information System (ARJIS) Data



Katie Mugg

ARJIS

# ARJIS Background

- Centralized regional database for law enforcement to:
  - Solve crimes
  - Identify offenders
  - Notify officers of alerts
  - Standardize crime statistics
- Promotes data sharing between agencies
  - Arrest reports, crime cases, traffic accidents, pawn slips, moving citations
- Non-confidential data is used for the public web-based crime mapping & statistics

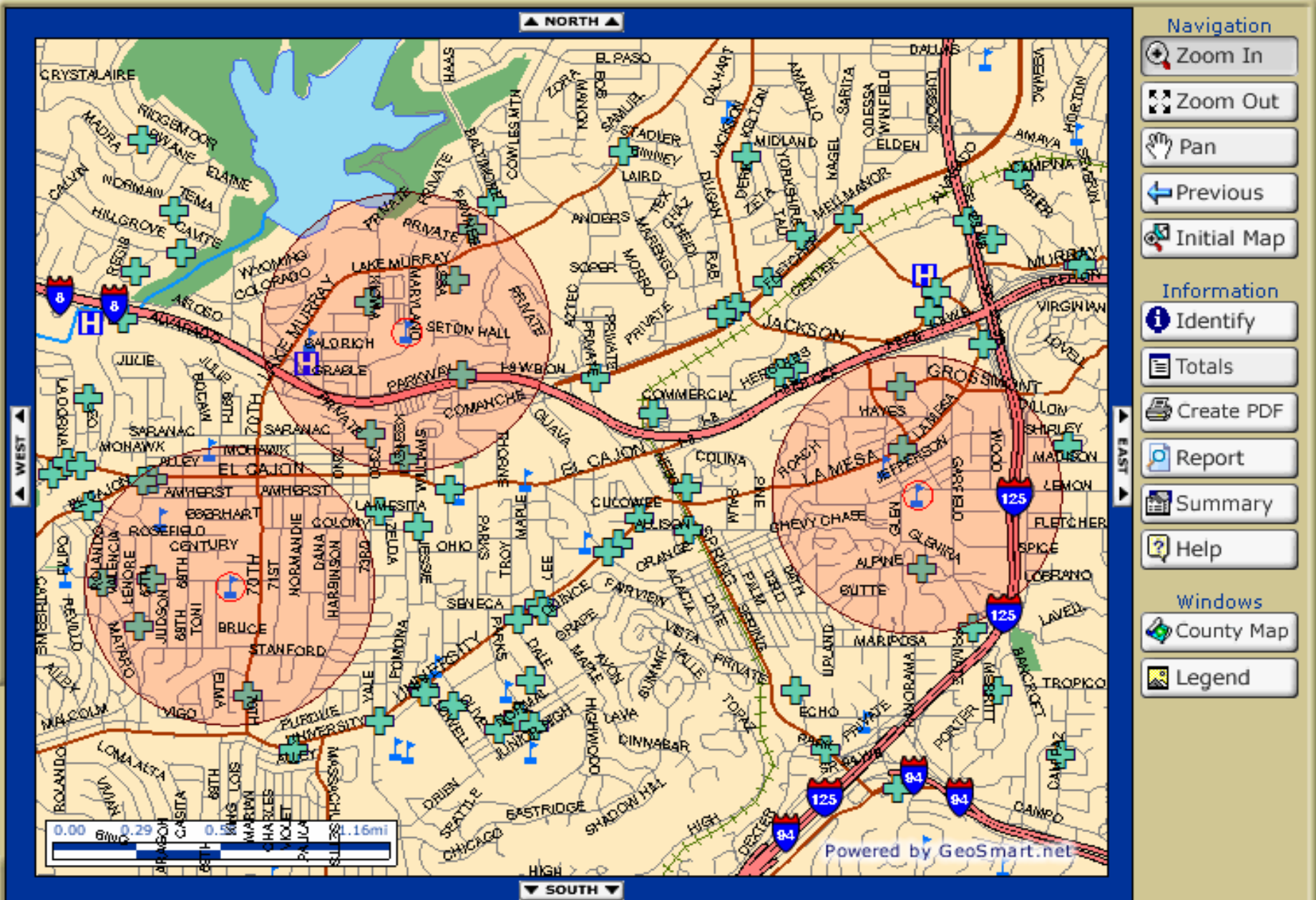
# ARJIS Public Data: Background

- **Data available for**
  - Maps: since Jan 2005
  - Tables: max 91 days worth in last 12 months
- **Data comes from**
  - city police, county sheriff, harbor police, some school related agencies (SD Unified School District, SD Community College Police, USD, Pt Loma Nazarene, MiraCosta, Southwestern)
- **Database contains:** All of San Diego County reporting, by
  - Address (approximated on map)
  - Zip code, city, county, neighborhood, police beat, supervisor & council districts
  - Date, time and day of week
  - Type of crime or citation
- **Caveats:**
  - State and Federal law enforcement agencies are not included
  - Other data requests may be possible (for fee)

# Regional Crime MAPS



## San Diego County



# ARJIS Data: Highlights

- Public website: [www.arjis.org](http://www.arjis.org)
  - Customized crime maps
  - Crime statistics/reports
- eWATCH – register for daily email update of crimes near an address (City of SD only at [www.sandiego.gov](http://www.sandiego.gov))
- Domestic Violence Communication System (not available to public)
  - Promotes information sharing in the DV community (shelters, batterer's treatment providers, law enforcement agencies)

# ARJIS Data

Questions???



# State-wide Integrated Traffic Records System (SWITRS) Data

Alan Smith, Ph.D., M.P.H.

Emergency Medical Services



# SWITRS Background

- **Program established**
  - The Highway Safety Act of 1966
  - Uniform data collection to produce meaningful statistics
- **Types of activities**
  - Monitor injury rates
  - Identify high collision locations
  - Develop traffic safety programs
  - Evaluate the effectiveness of safety measures



# SWITRS Data Background

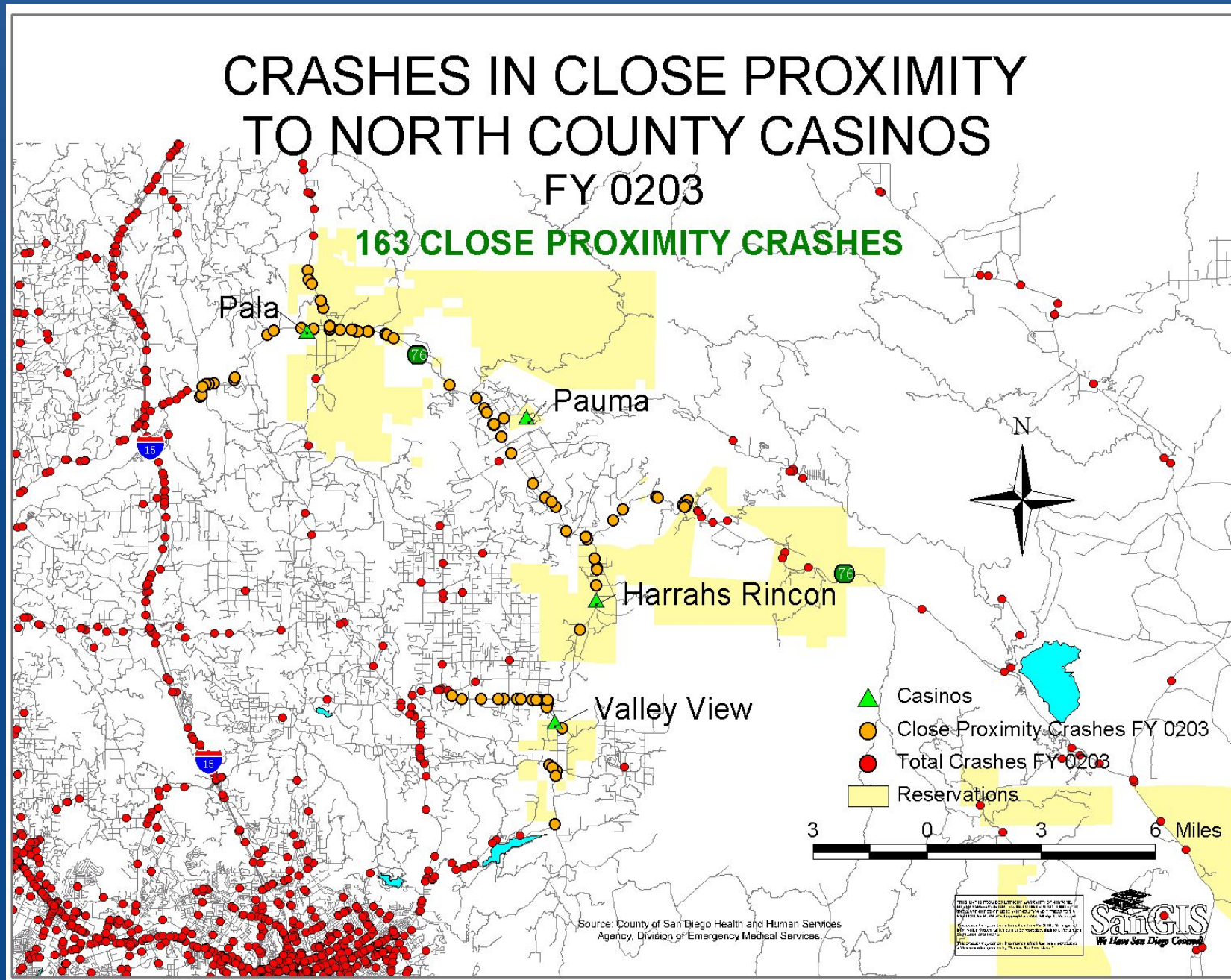
- **Data available since July 1995**
- **Data comes from California Highway Patrol, 6 month lag**
- **Database contains:**
  - Anyone involved in motor vehicle related injury crash on a public roadway in San Diego County
  - Demographics
  - Event location, environment (road, weather conditions), circumstances (drunk driving, distracted driving), seat belt use
  - Data available for various subject units: victim, party, and crash levels
- **Caveat:** Includes Injury Crashes on Public Roadways. No info on property damage only, or crashes in driveways, parking lots, etc. Also very limited info on injury severity (Complaint of Pain through Death).

# Example:

## Casino-Related Crashes

- Recent opening and expansion of local casinos has been accompanied by an increase in traffic on the rural roads leading to the casinos.
- Looked at data to see if there has also been an increase in crashes on casino roads.
- Large sudden increase in crashes close to casinos following new opening.

# SWITRS Map



# SWITRS Data: Highlights

- Annual report online:
  - [www.SanDiegoCountyEMS.com](http://www.SanDiegoCountyEMS.com)  
(select Injury Prevention, Epidemiology and Surveillance Page)
- Prevention & Control Programs:
  - Safe Kids San Diego
- Special Research Projects:
  - Graduated Licensing Law Evaluation

# SWITRS Data

Questions???



# Community Health Statistics Unit



Julie Cooke, M.P.H.



# Summary

Today you've heard:

- Why data is important
- Some of the health data available

Now:

- How to get data
- Who to contact

Next week you'll learn about using data:

- Determining what you need
- How to ask for data
- How to present your data

# Role of The Community Health Statistics (CHS) Unit

- “One Stop Shop” for health data
- Data Requests (619) 285-6479
- CHS Unit Website:  
[www.sdhealthstatistics.com](http://www.sdhealthstatistics.com)



# Examples of Data Requests

- Cancer, diabetes, heart disease and HIV rates for a regional hospital to prioritize services to better serve community needs (Online Community Profiles)
- For youth, the number of deaths, suicides, ADS usage, teen births and firearm injuries, for specific zip codes, to develop an intervention for at risk youth (EMS, ADS and Death data )
- Number of women in San Diego County who are mail ordered or brokered brides, for coursework and potential future funding (federal report)

# Website:

## [www.SDHealthStatistics.com](http://www.SDHealthStatistics.com)

- Community Profiles
  - latest Health & Demographic Data
- Links to Public Health Services Data Reports
- Links to Other Important Data Sources
- National Health Observance Articles – collaboration with San Diego County Medical Society monthly magazine

# New Website Style



## County of San Diego

 [SEARCH](#)

[Your County Government](#)[Community Services](#)[Healthy Kids & Families](#)[Business Resources](#)[Environment](#)[Public Safety](#)[Jobs](#)

### Health & Human Services Agency

- About HHSA ▶
- Programs
- All Services A-Z
- Regions ▶
- Facilities
- Help Me Find It
- Events Calendar
- Documents ▶
- HHSA FAQs
- Web Site Search



[HHSA](#) | [Programs](#) | [Public Health](#) | [Community Health Statistics](#)

## Community Health Statistics

Community Health Statistics provides health statistics that describe health behaviors, diseases and injuries for specific populations, health trends and comparisons to national targets. Community Health Statistics also provides or refers persons to available local, state and national statistics.

For more information send us an [email](#) or phone 619-285-6479

▼

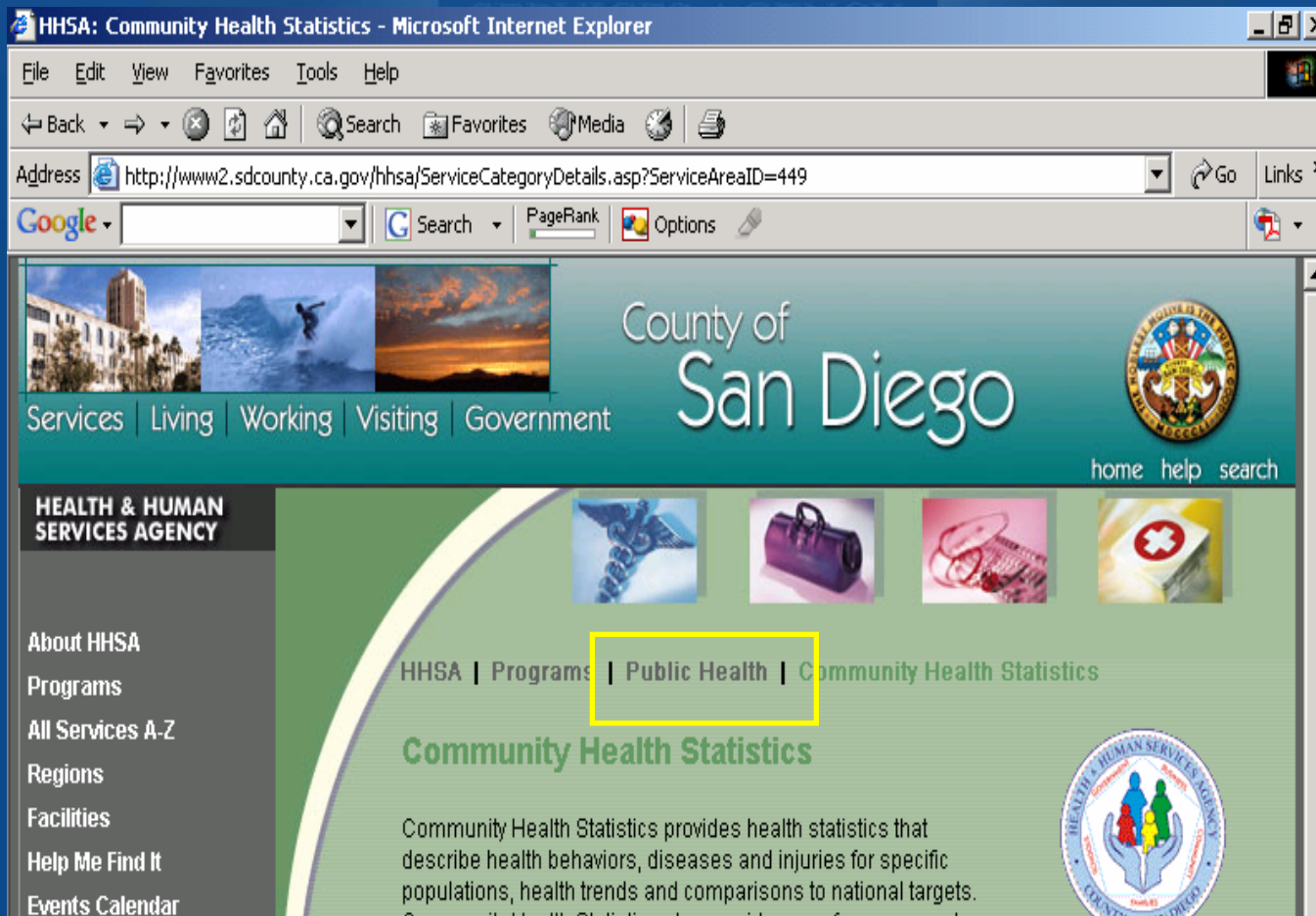


Use the Pulldown Menu to access information about the services offered by Community Health Statistics.

[County Departments](#) | [Accessibility Policy](#) | [Web & Privacy Policies](#) | [Help](#) | [Contact Us](#) | [Visiting San Diego](#)

# Navigating County of San Diego Web

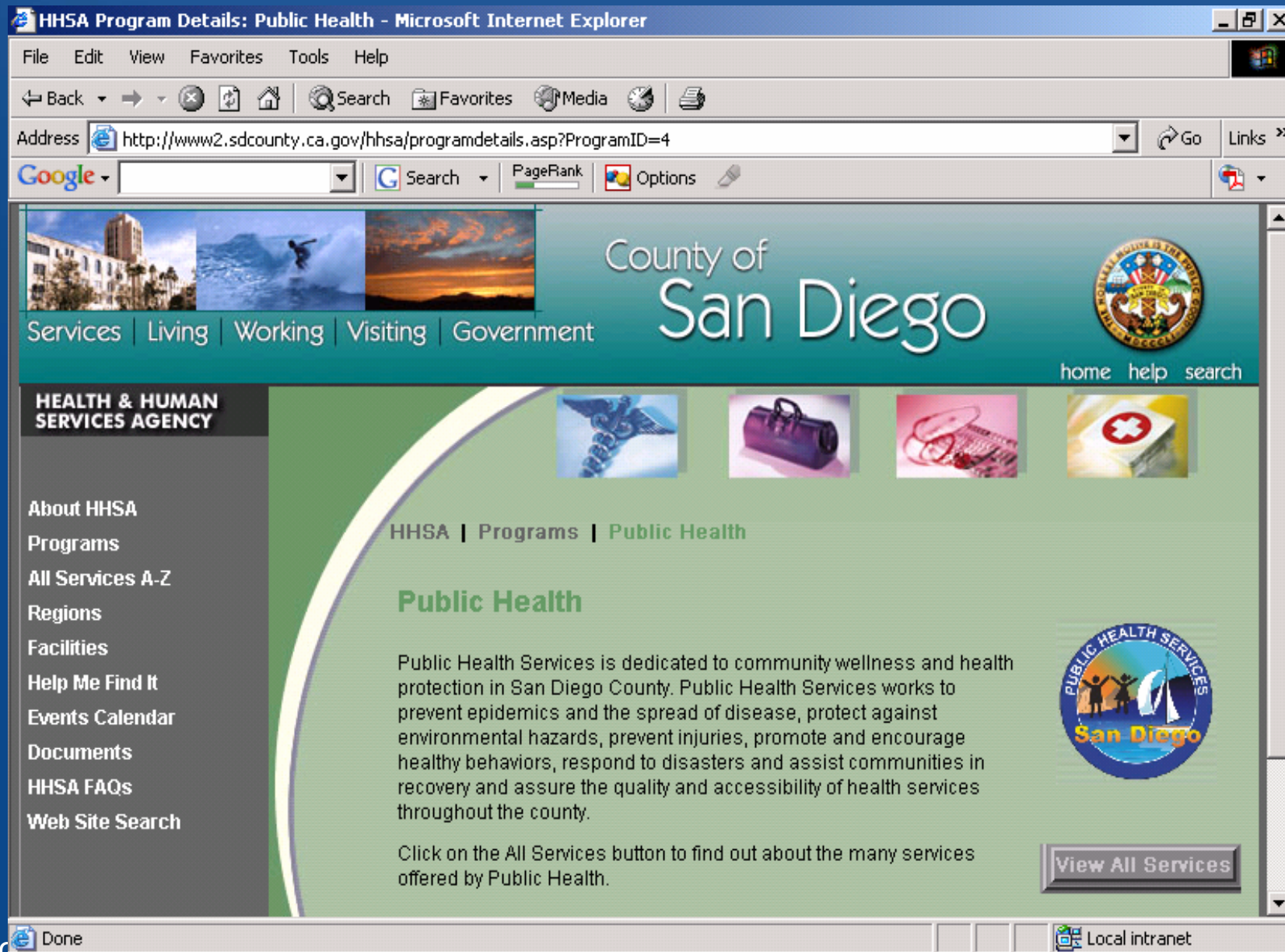
- Go to your favorite, easy to remember County site – i.e. [www.sdhealthstatistics.com](http://www.sdhealthstatistics.com)
- Click on Public Health in grey at top





# Navigating County of San Diego Web

## Public Health Services

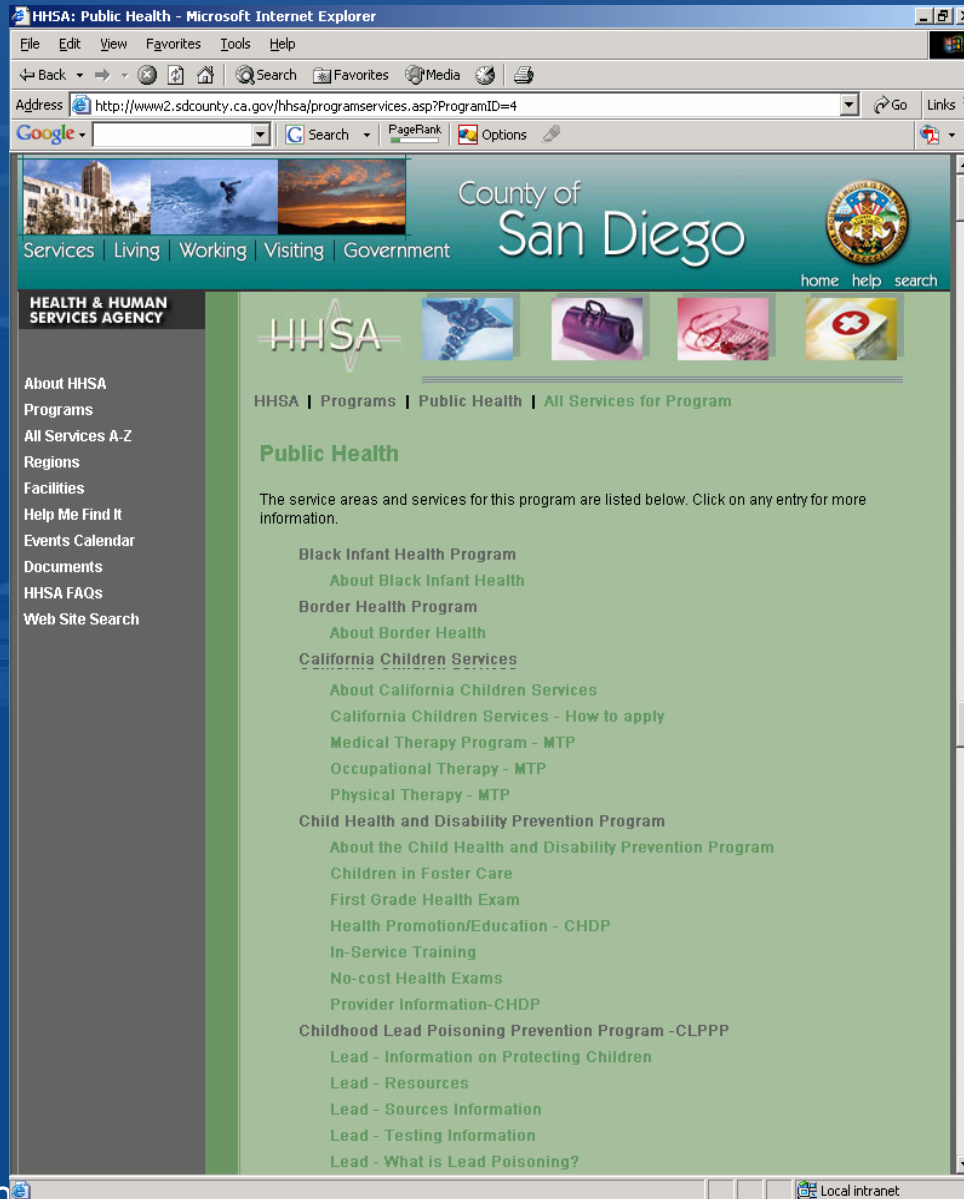


Select  
“View All  
Services”

Community Health Statistics

# Navigating County of San Diego Web

Full listing of all Public Health Services web pages



Scroll down  
to find the  
webpage  
you want...

# Navigating County of San Diego



# Learn to Use Public Health Data

## Preview of Workshop II





# Workshop Topics

- Data Measures
  - Analyzing data (ie how to calculate rate...)
  - Interpretation/Meaning
  - Presenting Data/Results
- Special Considerations
- Outcome Measures
- Program Evaluation
- Asking questions & finding data

# Special Considerations

- Choosing measures
- Geographic units
- Limitations
- Issue, small numbers
- Footnotes
- Interpretation

# Questions?

- Evaluations – please fill out!
- Questions???

## Contact Information:

Community Health Statistics Unit

6255 Mission Gorge Road

San Diego, CA 92120

[www.sdhealthstatistics.com](http://www.sdhealthstatistics.com)

**Data Requests (619) 285-6479**